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ORIGINAL ARTICLES.

OXALURIA IN MELANCHOLIA.

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IN a recent clinical lecture on melancholia, by a distinguished neurologist, particular attention was directed to the existence of crystals of oxalate of calcium in the urine of persons suffering from melancholia. Although not prepared to explain the exact relation between oxalic acid in the urine and the brain symptoms, the lecturer stated his belief that there is a distinctive and pathognomonic relationship, so that in a given case of mental depression, if a condition of oxaluria is associated with it, he considered that condition to be the determining factor, and accordingly classified the case as one of true melancholia. Clinically he finds "two sets of cases in which there is melancholia associated with oxaluria." In one class the administration of nitro-muriatic acid causes both the oxaluria and the melancholia to disappear; in the other class the remedy has no effect on either condition. In view of these convictions on his part, he thinks it "rather strange that those who have large opportunities in asylums do not follow out closely this line of clinical research."

As a contribution to this subject, it is my purpose to furnish here some statistical figures and practical inferences, based on original investigations made in this hospital. I will include in this study all the male admissions of the past twenty-six months. I cannot go back further than this, as I only began on January 1, 1884, to examine systematically urinary specimens, and to preserve a permanent record of the results obtained. Previous to that time, examinations were made only in cases where special indications seemed to suggest such a procedure, and as under such circumstances the record made was necessarily desultory and imperfect, it is practically without value in this inquiry. But the examinations I wish here to consider, are analyses of urinary specimens made for practical, clinical purposes, by means of chemical reagents and the microscope, of every male patient, in whatever bodily or mental condition, admitted from January 1, 1884, to March 1, 1886. Although a larger number of cases would probably make the study more interesting, yet I do not believe they would materially alter the results obtained, nor cast any discredit on the precision of the work here presented. As the presence of the crystals of the oxalate of calcium is always determined by means of the microscope, my paper will have to do only with a study of the urine by means of this instrument in search of these crystals, and not with what other facts may have been discovered by chemical reagents.

From January 1, 1884, to March 1, 1886, there were 172 male patients admitted into this hospital. Making general divisions, and, for the sake of brevity, not distinguishing between acute and chronic forms, these cases were divided as follows: mania, 72; melancholia, 38; dementia, 41; paresis, 18; imbecile, 3. Of these 172 admitted, 32, or 18.6 per cent., showed the presence of oxalate of calcium in their urine. Dividing these cases into their respective groups, we have the following: in the 72 cases of mania, we find the presence of crystals of calcium oxalate in 13, equal to 18 per cent.; in 38 cases of melancholia we find 7, equal to 18.4 per cent.; in 41 cases of dementia, 10, or 25 per cent.; in 18 cases of paresis, 2, or 11.1 per cent.; the remaining 3 cases were imbeciles and their urine contained no oxalates. A summary of these, places dementia at the head of the list with 25 per cent.; then melancholia, 18.4 per cent; then mania, 18 per cent.; then paresis, 11.1 per cent.; and on the whole number a percentage of 18.6. It appears from this showing, that if oxaluria is to be considered symptomatic of any one form of mental derangement, the palm must be given to dementia, and not to melancholia. It will be observed that melancholia, with its 18.4 per cent., falls somewhat short of being up to the average on the whole number, which is 18.6 per cent. In regard to the quantity of the oxalate present in each case, my examination notes credit two cases of mania, and one of paresis, with an "abundance," and all the remaining ones are marked "a few"—meaning the presence of one, two, or three crystals at most, in each microscopic field. Of these two cases of mania, one was of the subacute form, with delusions of suspicion, and produced by alcoholic excesses; the other was an acute case, and characterized by mental confusion, restlessness, and homicidal impulses; the case of paresis was typical of that form of insanity.

At the present time there are 13 cases of melancholia in the male wards, which comprise those who yet remain, of the number above given, along with others who were previously admitted. An examination of the urine of these 13 resident cases shows crystals of the oxalate in 2, equal to 15.3 per cent. It will be noticed that this is 3 per cent. less than was found to be the average on the total of the 172 cases, when first admitted, and also 3 per cent. less than was yielded by the 38 cases of melancholia as they were admitted during the past twenty-six months, thus showing that a condition of oxaluria in cases of melancholia obtains to a less extent than even the small percentage demonstrated in the first record. All these cases of melancholia are very typical in their characteristics. Of the 2 cases which furnish calcium oxalates, one has been with us for two and a half years, is sixty-eight years of age, has poor bodily health, and each day confidently expects to

be butchered in the most barbarous manner. The other man is forty-two years of age, has been with us for three months, accuses himself of all sorts of beastly practices, and incessantly bemoans his deplorable condition. The other 11 cases, which do not furnish oxalates, should theoretically feel themselves bound to do so. One is a recent case, of only one month's duration, in which the mental distress is great and the suicidal impulse prominent. Another is badly nourished, worries greatly because he is not able to pay his board, and says we are concocting a scheme for his ruin. Another, a member of our own profession, is constantly groaning and bewailing his unfortunate condition, and repeatedly asks us to telephone to his wife that preparations may be made for his funeral. Still another believes that the devil has him in full charge and directs all his movements, and he feels powerless to resist. The remaining cases are equally typical, and equally barren of oxalates.

Let us make one more analysis of the 172 cases admitted. It was noticed that, on admission, oxaluria existed in 32 of these cases. Up to the present time 15 of these have been discharged, and 17 still remain in the house. Of the 15 discharged, it is not known whether the oxaluria had disappeared or not, as no analysis was made previous to their departure. The 17 cases which still remain are divided in type as follows: mania, 7; melancholia, 3; dementia, 6; and paresis, 1. Of the 7 cases of mania, in 3 the oxalate of calcium has disappeared from their urine; their mental condition has not improved since their admission, and we do not expect them to recover. The remaining 4 cases still exhibit some oxaluria, of which number, only one, a case of acute religious mania, admitted the last week in February, we hope to restore. Of the 3 cases of melancholia, the oxalates have disappeared in all; 1 of them is convalescent, and the other 2 present a very unfavorable prognosis. Of the 6 cases of dementia, there is an absence of oxaluria in 5, and in neither is there the remotest chance for recovery. The sixth case, complicated with epilepsy, still contains some crystals, and presents no favorable symptoms. In the case of paresis, some calcium oxalate still remains; his prognosis is the customary one in such cases. Thus it appears that in a total of eleven cases, in which oxaluria had been present on admission, but subsequently disappeared, only one case is convalescent. And in a total of six cases in which oxaluria existed on admission, and still continues, only one case has any reasonable prospect of recovery.

Now what do all these figures and comparisons show? To be guilty of an Irish bull, I would say, that if they show anything, they show nothing—that is, they show nothing for the theory that there is an intimate, symptomatic, causal, reciprocal relationship between oxaluria and melancholia. Truly, as was remarked in the course of the lecture just quoted, "the relation between oxaluria and melancholia is not yet made out." Whatever relation may exist, it is so ephemeral, that in a clinical and scientific analysis the condition of oxaluria is compelled to take a subordinate position, and to be classified simply as an incidental symptom of melancholia.

As before shown, if oxaluria is to be considered as characteristic of any one form of mental disease, that condition known as dementia claims precedence, inasmuch as 25 per cent. is a better showing than 18.4 per cent. To illustrate a natural tendency of dementia to be associated with a condition of oxaluria, I will instance the case of a young man admitted into our wards nine months ago, in a state of mild mental derangement, shown principally by an expressed belief in the existence of witches. Several weeks prior to his admission, under the delusion that a certain female relative was a witch, he procured a gun and fired it at her with intent to kill. On admission, there were no crystals of oxalate of calcium in the urine. One month ago he passed into a condition of dementia, which still continues; he now has oxaluria.

When it is remembered, as Dr. Golding Bird was the first to show, that oxalate of lime is a very common urinary deposit, and that in the majority of instances the crystals form after the urine has left the bladder, by the decomposition of the urates—and when further it is remembered with what ease it may be introduced into the system by such very common articles of diet as rhubarb, tomatoes, onions, turnips, and the like, we should be very guarded in predicating the condition of oxaluria as distinctively pertaining to any one special disease. Especially should we be thus mindful, when such men as Lehmen, Bence Jones, Garrod, and many others, direct special attention to the fact that oxalates are found in very great abundance in the urine of persons in good health. These observers also attest the fact that oxaluria is by no means essentially connected with any special disease or train of symptoms.

When oxalate deposits are clinically found, and reasonable grounds appear to exist for attributing to them a pathological significance, they appear to be due either to the incomplete oxidation of the saccharine, oleaginous, or albuminous principles of the ingesta, or to increased tissue metabolism, or in dyspeptic cases where a catarrhal condition of the mucous membrane disposes to fermentation and an excessive formation of acids, or where calculous deposits of dumb-bell crystals are found, having their origin in the mucus of the urinary passages. In these conditions, regardless of the distinctive pathological type of the disease we may have in hand, must we look for an intelligent explanation of the presence of calcium oxalate in the urine. We cannot predicate it of any class of diseases, or of any one individual complaint. No doubt, in mental disorders, the condition of oxaluria obtains as frequently, and perhaps more so, than in any other class of affections. The digestive powers of the insane are often very imperfect, especially in cases of melancholia and acute dementia, thus furnishing good pathological conditions for the production of oxaluria. It is true that many of the insane eat ravenously and largely, but it is not always because of the vigor of their digestive and assimilative functions; they are often of costive habit and have feeble assimilative powers. Then, again, the mental distress which they often undergo, influences many of the vital functions, and also very perceptibly hastens tis-

sue metamorphosis, thus furnishing another important element in the production of oxaluria. The influence of mind over matter is a very mysterious but palpable fact, and the subtle chemistry of life, in action and reaction, demonstrates abnormal tissue waste nearly as frequently as it does normal tissue growth.

There was a time when the simple presence of phosphates in urine made the medical attendant look mysterious, and whisper ominously concerning a central nervous lesion. Likewise, a prophetic leer, indicative of the tomb, would mantle his features when with a little nitric acid and heat he would elicit albumen, or by applying his spirit-lamp to an acid urine, treated with caustic potash, he would get the canary, or brown, or black color indicative of sugar. Such unqualified inferences and gloomy prognoses are no longer permissible, and it is to be hoped that no clinician, in these days of good microscopes, will be so bold as to attempt to establish any very definite connection between oxaluria and melancholia. Let the incidental juxtaposition be estimated at its real value, but let us not unduly magnify a coincidence. And, when we find cases of melancholia associated with oxaluria, let us not be guilty of perpetrating an irrational division of the disease into two varieties, based on the fact that in the one case nitro-muriatic acid dissipates both the diathesis and the disease, and that in the other it does neither. Such a division is most irrelevant and unscientific. As well divide all headaches into two varieties—the first constituting those which are relieved by inhalations from the family camphor bottle, and the second, those which are not influenced by this procedure. Clinically it is found that remedies administered for the purpose of improving the general health, of promoting the oxidation of ingested food, and of strengthening the digestive and assimilative powers of the primæ viæ, will lead to the diminution or extinction of the oxalate deposits. And when our patient is again restored to health and happiness it will be because those abnormal systemic conditions which produced the oxaluria have been removed, and not because the oxaluria *per se* no longer exists. Cold bathing, exercise, attention to diet, the mineral acids, bitter tonics, iron, now and then a gentle purgative, have all been found efficacious in treating the condition incident to the presence of calcium oxalate.

A ministerial friend, whose Sabbath labors always entailed great mental anxiety and considerable physical fatigue, was accustomed to go fishing all day on Monday, in this way recuperating his mental and physical powers, and getting rid of the octahedral oxalates which excessive tissue waste had produced. It is a new thought to me, that being overworked on Sunday, and, according to orthodox practice, feeling "blue" on Monday, with an incidentally associated exhibit of a few crystals of oxalate of calcium in his urine, he was, therefore, for that day at least, the victim of "a form of melancholia." Truly the number of his attacks and recoveries have been phenomenal, and he still lives. A few years ago, feeling somewhat fatigued and below par, for want of sufficient out-of-door exercise, my own urine yielded an abundance of crystals of oxalate of calcium. A very short vacation, *minus* nitro-muriatic acid, sufficed to restore me to my usual vigor, and to dispose of the oxalates at the same time. My attack of melancholia was quite brief.

I am prepared to admit that oxaluria exists with some frequency in cases of mental disease, and that as a symptom it has its importance, and may help to determine the proper treatment. It does not seem, however, that it should be considered of greater importance when thus associated, than if it were found in connection with diseases not mental. And further, it is surely untenable to believe that it sustains any peculiar or symptomatic relationship with that form of mental disease known as melancholia. Although oxaluria and melancholia may, and sometimes do occur synchronously, they cannot rationally be credited with such an important relationship as cause and effect. As we have seen, dementia has much stronger claims to such consanguinity than has melancholia, and yet we cannot fairly predicate it of either. Let us not claim for oxaluria too high a place in the etiology of disease. It has its importance as a symptom, and often affords us great aid in diagnosis and in treatment, but let us withhold from it parental powers until, with accredited authority, it can lay just claims to such a distinction.

A FEW SUGGESTIONS FOR THE PREPARATION OF MILK FOR INFANTS.

BY JOHN M. KEATING, M.D.,
OF PHILADELPHIA.

AT this time of year the subject of infant diet becomes a very important and interesting one. At the recent Sanitary Convention held in this city under the auspices of the Pennsylvania State Board of Health, I advocated the use of cow's milk prepared so as to resemble closely woman's milk as the best form of diet for at least the first three months, urging at the same time that a certain amount of a soluble salt of lime should always be added to an infant's food to counteract the great tendency to rickets which exists in all bottle-fed, and, indeed, in many of the nursed children of the day.

Let us take one of the given analyses (Percy) of cow's milk, that of an ordinary mixed dairy:

Water	86.67
Butter	3.20
Sugar	4.20
Casein	5.30
Salts	0.62

If this is diluted with *three* times its bulk of water, it will give us the following:

Water	96.70
Butter	0.80
Sugar	1.05
Casein	1.33
Salts	0.16

There seems to be some difference of opinion in regard to the quantity of casein and sugar (per cent.) in human milk. In every young infant it is better to have the minimum quantity as a basis to begin with, so that by diluting the milk as above we reach, ac-

curately enough for practical purposes, the percentage as given by A. V. Meigs, viz.:

Water	87.16
Butter	4.28
Sugar	7.40
Casein	1.04
Salts	0.10

If to a *four* ounce mixture composed of *one* ounce of ordinary milk and *three* ounces of water, we add *one* ounce of ordinary cream (about fourteen and a half per cent. of butter), and about eighty grains of sugar of milk (a level teaspoonful),[1] we will get a result which closely resembles woman's milk, though containing less casein and more sugar than most authorities give as the result of their investigation. Still, for very young infants this is an advantage rather than otherwise. As the child grows older, say two or three months, the amount of casein can be increased as follows:

Take *two* ounces of ordinary fresh milk, add *two* ounces of water: the following will be the result:

Water	93.38
Butter	1.60
Sugar	2.10
Casein	2.65
Salts	0.31

Now, add two tablespoonfuls of ordinary cream of good quality and a heaping teaspoonful (about 100 grains) of milk-sugar. Cream itself contains about three per cent. of casein. But I have insisted that there must be a certain amount of lime added to the mixture, and I do not think that lime-water always serves the purpose required, even if it be given in large amounts. I prefer the soluble *lactophosphate*, and have used it largely with success for some years. To make this matter simple and to facilitate the carrying out of instructions, I have had compressed *tablets* (*Milk Food Tablets*) made, each containing:

Sugar of milk	26 grs.
Calcis lactophos.	⅙ gr.
Calcis. carb.	¼ gr.
Sodii bicarb.	½ gr.
Potass. bicarb.	½ gr.
Sodii chloridi	⅙ gr.

These can be made up in large quantities, put in cans or wide-mouthed bottles, and are to be used as follows:

To prepare the bottle for a child about a month old or younger, take three ounces of boiling water and stir in one ounce of ordinary milk; to this add three tablets and dissolve thoroughly; place the mixture in a nursing bottle and add two tablespoonfuls (one ounce) of good, fresh cream; shake well, and give to the child at about the temperature of the body.

For a child two or three months old, prepare the bottle as follows:

Take two ounces of water (boiling) and stir into it two ounces of good, fresh ordinary milk (if the child is of a constipated habit, they need not boil together); then dissolve into the mixture four tablets, pour this into the nursing bottle, and add two ounces of fresh ordinary cream; shake well.

If the child's stools contain a mass of curds, showing deficient digestion, it would be well at once further to dilute the milk. Should this not be sufficient a small quantity of malted food, such as Mellin's or Horlick's, a teaspoonful to the bottle, can be added to stimulate the digestive functions. If this fail, then use *peptogenic* milk powder, and predigest the curd; and, finally, if still unsuccessful, put the child on condensed milk.

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[1] A silver teaspoon, such as is in ordinary use, when filled with sugar of milk and "levelled," will contain about fifty-seven grains; a plated teaspoon contains about five grains less—practically ʒj. A silver teaspoon when "heaping" holds about 117 grains of sugar of milk—practically ʒij.

TUMOR OF THE ANTRUM AND ORBIT.[1]

BY THOMAS R. POOLEY, M.D.,
OF NEW YORK.

THE following case is reported for the purpose of illustrating one of the ways in which tumors that begin in adjacent cavities extend into the orbit; and to provoke discussion, especially of those engaged in the practice of general surgery, as to the best method of attacking them. It is a question of propriety whether such growths belong strictly to the domain of ophthalmic surgery; but it is true, nevertheless, that they often present themselves to the specialist on account of the ocular symptoms. This communication has nothing to do with the much more varied and more frequently occurring tumors from whatever cause which primarily develop in the orbit itself, which, in their turn, may also invade neighboring cavities.

J. R. S., æt. fifty-seven years, says he has been healthy with the exception of occasional sick headaches and attacks of indigestion, until about a year before he came to consult me (September 2, 1885). About this time he observed a bony tumor over the right occipital bone, which grew slowly, without pain, and then decreased somewhat in size until, as he says, it was about the size which it now presents—an English walnut. It is very hard, except in its centre, where an ill-defined sense of fluctuation can be felt; it is firmly connected with the bone, and immovable. Soon after, another such growth began to appear on the left side of the forehead immediately over the superciliary ridge, and extending upward. It measured 1¾″ by 1″, was of bony hardness, and firmly united to the bone. This growth, while it reached quite to the upper margin of the orbit, did not go into this cavity. The development of these growths, which were quite painless, gave the patient little or no concern. It was not until the appearance of the eye symptoms, now to be detailed, that he sought advice. Six weeks before I saw him diplopia occurred, and he noticed slight drooping of the upper lid, and a displacement of the eye upward.

Upon examination, I found slight ptosis, the eyeball slightly displaced upward, while the movement downward was considerably impeded. In all other directions the movements were normal. There was diplopia in the upper and lower fields of fixation: S. R. $\frac{20}{XX}$, Em., H., $\frac{1}{36}$, S. $\frac{20}{XX}$. The ophthalmo-

[1] Read before the New York State Medical Society, February, 1886.

scope, however, did not show any abnormal condition of the fundus oculi. There was purulent inflammation of the lachrymal sac, and the left nostril was impervious to air. A Bowman's probe, however, was readily passed into the duct after slitting the upper canaliculus. The region of the cheek just below the orbit was slightly swollen, brawny to the touch, and at times painful and numb. A careful palpation of the orbit showed that its floor was invaded by a tumor which extended almost from its inner to its outer border, most prominent in its centre. This growth, which was firm, but slightly elastic, at first gave the impression of bone to the touch, but after more careful examination I concluded was not such. My impression was that we had to deal with a growth which began in the maxillary antrum, gradually filling and distending the cavity until it forced its way through the place where resistance was least—the floor of the orbit, and then invaded this cavity.

From September 2 to October 24 I kept the patient under observation and treatment, having already advised him that an operation for the removal of the growth would most likely become necessary. During this time we tried the effect of gradually increasing doses of iodide of potassium, although he gave no history of specific disease. This did no good, but the growth evidently made progress, the symptoms already mentioned increased, the eye began to protrude, and the ophthalmoscope showed decided venous hyperæmia of the optic disk. Accordingly, on the afternoon of this date, assisted by Drs. Townshend and Hawley, I proceeded to operate, with the patient fully under ether. A curvilinear incision corresponding to the lower margin of the orbit, and extending from the inner to the outer commissure, was made. The dissection was carefully continued until its margin was exposed, care being observed not to cut through the conjunctiva. It was now found that our conjecture as to the character of the tumor was correct. A livid red, fleshy-looking mass presented through a hole in the orbital plate, the rough margin of which could be felt surrounding the tumor. At first we thought the tumor was encapsulated, but soon found this not to be the case. Removing the growth from the orbit, it was found that it entirely filled and distended the antrum with a semi-solid gelatinous mass, which was very difficult to remove through the rather insufficient hole in the orbital floor, this was accomplished by the finger, forceps, and finally, syringing the cavity, until it was quite clean. In some places the floor and sides of the cavity were denuded and rough, and its inner wall perforated by the extension of the growth into the nostril. This part of the growth, too, was cleanly removed. The growth did not invade the depth of the orbit.

The operation, which was necessarily a long one, was protracted by the hemorrhage, which at times was very embarrassing, and the difficulty encountered in removing all the tumor from the cavity, and lasted over an hour. The wound was closed with sutures, except at the outer angle, where we left a sufficient opening for drainage,

Healing followed without any unfavorable symptoms; the opening in the nostril and that left at the outer angle of the wound, seemed sufficient for drainage, and in about a week was sufficiently closed to admit of the patient's leaving my private hospital. There was considerable discharge from the nose and wound for about a week longer, but at the expiration of that time the patient returned to his business, and has only made me infrequent visits. There has been a gradual improvement in his diplopia, and other symptoms. When seen last (Dec. 4, 1885) the exophthalmus had entirely gone, the deviation of the eye almost, and it was only in certain strained positions of the eye that he saw double; his vision had increased to $\frac{20}{XXX}$, ophthalmoscopic appearances were normal, and all the pain and numbness of the cheek had ceased. The nostril, however, was still stopped, although he says he can breathe through it at times. There was an inconspicuous scar which was adherent to the bone, and considerable œdema of the lid below it. No tumor whatever could be felt in the orbit. He attends to his duties, which are exacting and arduous, and seems quite well and comfortable.

Portions of the growth were sent to Dr. Thomas E. Satterthwaite, who has kindly sent me the following report:

"The microscopical examination of the tumor removed from the upper maxilla, shows that it is chiefly composed of round cells with some fibrous tissue bands—the appearance corresponds to that of a sarcoma."

If the tumor involving the orbit develops primarily in this cavity, there can be no doubt as to the propriety of carrying on the operation in such a way as to explore, by incision, this region. But it seems to be also the best manner to explore those which invade it from without, as the antrum, nose, or frontal sinus. Even if we should have to resort to other methods to complete its removal from these contiguous cavities, it will probably, as in the case above mentioned, be found quite feasible to accomplish its removal through the same opening which it has made in its extension into the orbit. The writer is especially desirous of criticism from his surgical colleagues, as to whether an incision to expose more fully the cavity of antrum, or, perhaps, removal of the upper maxilla, would in this case, have been more likely to provide against the return of the growth by its more thorough eradication. It is to be confessed, that in spite of all diligent care, an element of uncertainty as to the removal of every part of the pseudoplasm remains. The microscopical examination shows the tumor to belong to a class which usually return; and in this case the gravity of the prognosis is no doubt enhanced by its simultaneous appearance with other tumors of the bone. As has been stated, one of these is already beginning to soften in its centre. As to the relation these bony tumors may have to the development of sarcoma in a bony cavity like the antrum of Highmore, I am unable, from want of experience, to state; and this, too, is a matter upon which I should beg to hear from those who have had larger opportunities for observation than I have.

MEDICAL PROGRESS.

ACTION OF URETHAN.—DR. KRÆPELIN contributes a short article to the *Neurologisches Centralbl.*, March 1, on the action of urethan, or ethylic carbamate. On physiological grounds, Schmiedeberg recommended this drug as a hypnotic, and since then it has been employed therapeutically by Jolly, von Jaksch, and Sticker. The reports upon it have hitherto been uniformly favorable. Dr. Kræpelin's experience extends to about two hundred administrations in thirty-four patients. The dose employed varied between one and three grammes; on two occasions, four and five grammes were given. The author never observed any unpleasant effect, either during or after the administration of the drug. Only in one case of alcoholic gastric catarrh, vomiting was produced by one of the large doses above mentioned. Loss of appetite, however, has never been observed, even after the employment of the drug for weeks. Urethan acts as a pure hypnotic. About ten or fifteen minutes after taking it, the patient falls into a quiet sleep, that lasts several hours, and from which he wakes without any unpleasant feeling in the head. Should this sleep be interrupted, the patient, as a rule, falls asleep again when the interruption is withdrawn. This, however, depends, of course, upon the size of the dose and on the cause of the disturbance. Urethan is not a very active hypnotic; and, where there is much excitement, it is far inferior to paraldehyde, and is practically useless. In delirium tremens especially, it disappointed the expectation raised by Sticker. Perhaps, if larger doses had been given, the result woud have been more satisfactory. Urethan has no power to relieve pain; hence it cannot take the place of morphia. Nevertheless the author, like von Jaksch and Sticker, has had excellent results, from its combination with morphia in some cases of phthisis. When the drug was given in doses of one gramme, it acted efficiently in only fifty-four per cent. of the cases. When given in doses of two or three grammes, it gave a good result in about seventy per cent. Dr. Kræpelin's patients were all women, mostly suffering from mental disease. The form of alienation in which the drug gave the best results, was melancholia. Here it produced quiet sleep in seventy-seven per cent. of cases. In the excited stages of general paralysis, it often failed to produce any effect; in sixty per cent., however, the larger doses gave a satisfactory result. Many of the patients were very anæmic. The author considers the drug especially useful in cases of mild excitement or depression, accompanied by exhaustion or depressed nutrition. One great advantage possessed by urethran over paraldehyde, in addition to the longer duration of its action, is that its smell and taste are not so disagreeable, and it can be taken in simple solution without flavoring agents.—*Lond. Medical Record*, April 15, 1886.

PUNCTURE OF THE SPLEEN IN THE DIAGNOSIS OF TYPHOID FEVER.—PHILIPOWICZ points out the extreme difficulty of finding the typhoid bacillus in cultivations made from fecal matters in typhoid fever, on account of the extremely rapid growth of other microörganisms, and communicates four cases in which he was able to establish the diagnosis by means of matter taken from the spleen during life, a mode of procedure not likely to be frequently adopted in this country. He proceeded in this manner: The spleen was first carefully mapped out, and the skin over it thoroughly cleansed by means of a 1 in 1000 solution of corrosive sublimate. Absolute alcohol was then applied, and the skin allowed to dry. The needle of a Pravaz syringe sterilized by steam was then inserted into the spleen in the axillary line between the ninth and tenth ribs, its presence in the spleen being determined by the action on it of the respiratory movements. The piston was then slowly withdrawn, and in this way a few drops, sometimes half a syringeful, of splenic pulp were obtained. The cultivations were made from the matter so extracted, and in the first case the cultivations were made by dipping a platinum wire sterilized in the flame into the spleen juice, and then plunging it into meat-peptone gelatine. Of four inoculations so made but two succeeded, and that only after an interval of seven days, which would be useless for diagnostic purposes.

Afterward he shook up the splenic pulp with the gelatine, and poured the mixture out on plates. In this way, after forty-eight hours, cultivations were obtained of the typhoid bacillus. Similar splenic punctures were made in all in about twenty cases without any bad results, so that the procedure is harmless.

A caution is given that the absence of the bacillus will not disprove typhoid fever. The examination may be made at all periods of the disease except in the retrogressive stage.—*Manchester Medical Chronicle*, May, 1886.

SOLUTION FOR USE IN OZÆNA.—The following formula is recommended by THOMSON

Sodium carbonate,	
Sodium borate . . .	āā gr. lv.
Labarraque's solution . . .	ℿxxx.
Glycerine	ʒiij.
Water	fʒviij.—M.

The solution to be used with an atomizer as a local application in ozæna.—*L' Union Médicale*, April 17, 1886.

LAPAROTOMY IN PERITONITIS.—At a recent discussion on abdominal section in the Medico-Chirurgical Society of Edinburgh, Mr. Lawson Tait said that the presence of peritonitis, together with some other condition which would by itself involve abdomidal section, is the most potent of all reasons for the immediate performance of abdominal section. But if we take cases where there is no other condition present except the peritonitis, which would demand interference, the peritonitis alone is an imperative reason for interference. In cases of the chronic disease associated with suppuration, or with the formation of those gaseous masses which have given rise to the name of tubercular peritonitis, the treatment of opening the abdomen, completely clearing out all effusion which can be reached, and subsequently draining the cavity, has met with a perfectly uniform success in my hands in its immediate results, and with a secondary success, that is to say, complete cure of the disease and the establishment of perfect health in at least eighty per cent. of the cases.—*Edinburgh Medical Journal*, May, 1886.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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SATURDAY, JUNE 5, 1886.

THE PRESENT STATUS OF ABDOMINAL SURGERY.

THE publication was concluded in THE MEDICAL NEWS last week of DR. SENN'S admirable and scholarly paper on the present status of abdominal surgery, as it falls within the province of the general surgeon. We desire now to call special attention to this article, which presents, with great completeness, the indications for operative interference in various disorders within the abdominal cavity. It will be seen, from a careful perusal of it, that in a number of respects the lines of such interference are not yet very clearly defined; that the circumstances under which it is proper to open the abdomen are not yet incontrovertibly established; and that many operations of this sort are still, to a certain extent, experimental. This must be borne in mind in judging what has already been accomplished, and equally in deciding what still shall be attempted. It would appear that a bolder treatment of intra-abdominal trouble than has heretofore prevailed is justified by recent experience in this direction, and that surgeons may, nowadays, do much in a number of conditions which were once regarded as hopeless. At the same time, we think it proper to emphasize a point which Dr. Senn does not overlook, namely, that courage and temerity are not the same thing. It is well in the flush of triumph not to neglect the counsel of those whose natural disposition, or experience, or both, prompt them to raise a warning voice against carrying a good thing too far. It happens that, just as the sanguine paper of Dr. Dennis, which we published in THE MEDICAL NEWS for March 6, 1886, and the present one by Dr. Senn were coming out, the last volume of the *International Encyclopædia of Surgery* has appeared, containing a careful paper on "Intestinal Obstruction," by DR. ASHHURST. In this paper the author states his conviction that operative interference in such cases is too frequent rather than too rare. He lays great stress upon one condition of obstruction which is not mentioned by Dr. Senn, namely, enteritis. In a certain proportion of cases, in which the symptoms of obstruction arise, they are due to this disorder. And it is well that attention should be called to this fact in connection with the eulogies of operative interference for intestinal obstruction, in order to prevent mistakes which might be made by those who may have more zeal than discretion.

Another interesting contribution to this subject is contained in a recent paper by DR. H. BRAUN, of Jena, in the *Archiv für klinische Chirurgie*, Bd. xxxiii. Heft 2, 1886, which contains references to a number of tables of statistics, and a detailed account of 61 cases in which an operation was done for intestinal occlusion. Of these operations, 51 were laparotomies, in 30 children and 21 adults. The result was recovery in 11 cases, and death in 40. In 24 of the cases it was found impossible to reduce the intussusception. These 24 patients all died, except one in whom the irreducible intussusception was resected; in 11 other cases of resection the patients died; and death followed an attempt to overcome the difficulty by enterotomy, 9 times. Out of 27 cases in which the intussusception was reduced, 11 recovered, and 16 died; and of these, a further analysis shows that only 4 children recovered out of 18; while 7 adults recovered out of 9. In 10 cases in which enterotomy was done without a previous attempt to reduce intussusception, all the patients—3 children and 7 adults—died. These are the chief points of Braun's statistics. The conclusions he draws from his own study of them are: That operations for intestinal obstruction should be undertaken as early as possible, and that physicians should not hold the cases back so long as to diminish the chances of success on the part of the surgeon. When it is impossible to reduce the intussusception, careful search should be made for any portion of the bowel in which there is gangrene, or a tumor, and this should be at once removed and resection performed. Resection should also be performed when it is impossible to reduce the invagination, except in cases in which the condition of the patient is such that he could not survive the prolongation of the operation, or in which there is such great meteorism that it is impossible to return the bowel. In such cases, the formation of an artificial anus is the proper course.

Similar conclusions have been reached by PROF. OBALINSKI, of Cracow, who concludes an interesting paper on this subject in the *Wiener medicinische Presse* for March 21, 1886. Of twenty cases in which he operated, he thinks the absolute necessity of the operation could be doubted in only one, and this one

had a brilliant termination. In the absence of urgent symptoms, he is accustomed to wait and watch from twelve to twenty-four hours; but when the patient's strength is rapidly failing, or collapse suddenly sets in, he thinks it is best to do the operation within the first ten or twelve hours.

In concluding, it may be proper to say in regard to the attitude of conservatism, which is, perhaps, too much overlooked, or underrated, at the present time, that it rests chiefly upon the possibility of error in diagnosticating the cause of the symptoms of intestinal obstruction, and upon the fact that statistics show a slightly larger percentage of deaths after operation than after expectant treatment. As to the former objection, it ought to fall before the improvement in diagnostic skill which a study of the subject might be expected to bring about. As to the second objection, it may depend upon the fact that heretofore the operation has been left till too late, and that it has consequently not had a fair chance of success.

It may be hoped, further, that with more frequent performance of this operation, its sources of danger will be better understood, as well as the elements which may contribute to its success. Such a point as we recently called attention to concerning the fate of intestine deprived of its mesentery, may perhaps disclose the reason for some failures; and other points, of equal significance, will doubtless present themselves for consideration from time to time. One such is made, we think by Obalinski, who advocates the employment of boric acid, in warm three per cent. solution, instead of carbolic acid, for the toilet of the peritoneum, and a separate set of catgut sutures for the peritoneum, the overlying tissues being secured with metallic sutures for the muscular tissue, and a glover's suture of silk for the skin. Finally, while we would impress upon our readers the importance of prudence in undertaking operations upon the abdomen, we incline to the opinion that, as hope points in the direction of action, it ought not to be regarded as an insurmountable objection that thus far operative interference has not justified all that its advocates have anticipated for it. It should, moreover, be remembered that nature's processes do not admit of improvement, while those of art do.

THE LATEST STATISTICS OF OVARIOTOMY.

LITTLE more than three-quarters of a century has elapsed since MCDOWELL, in a small Kentucky village, first performed ovariotomy, and now LAWSON TAIT, in one of the great cities of England, has brought the operation to a perfection which probably can never be exceeded. It is remarkable that he who began, and he who has obtained the highest success in one of the greatest and most beneficent of operations should belong to the same century, and to the same English-speaking race. The glory of this success belongs chiefly to these two men, but the good which results is for all.

What struggles the earlier ovariotomists engaged in to demonstrate that the operation was right and beneficial! How they were reproached, criticised, condemned, even by leading members of the profession! But they bravely struggled against all these adversities, assured that the day of triumph would come. It has come, and ovariotomy for the removal of diseased ovaries is everywhere accepted as wise, judicious, necessary. But not even the most sanguine of the early friends of the operation could ever have dreamed of the wonderful success attained by Keith, Kœberlé, Dunlap, Homans, Battey, and other celebrated operators of the present day. Still less could they have anticipated the wonderful results which Lawson Tait has obtained, and which have recently been published.

The *British Medical Journal* of May 15th, contains a paper read by Mr. Tait before the Birmingham and Midland Counties Branch, entitled, "One Hundred and Thirty-nine Consecutive Ovariotomies performed between January 1, 1884, and December 31, 1885, without a Death." Such a report by its very title at once astonishes and delights. There is no need now of labored statistics to show how many years of life ovariotomy with a mortality of twenty per cent., secured to the mass of those suffering with ovarian tumors. The only thing is to study Mr. Tait's methods upon which his amazing success in good degree must depend, and seek to make them a part of the operation, so that others may hope to approximate that success; to equal it will be difficult, to surpass it impossible.

Of Mr. Tait's patients, the two youngest were eighteen, and the oldest was fifty-nine years. While most of the cases were of cystoma, there were one sarcoma, four abscesses of the ovary, one dermoid cyst, and twenty-six cases of parovarian cyst. None of these cases had been tapped. The average length of the abdominal incision was but two inches. Instead of sponging out the abdominal cavity after the operation, blood-warm water was allowed to flow into the abdomen, washing all the organs, and continued until the water came out clear. He remarks as to the dressing of the wound, "I still adhere to the dry absorbent cotton-wool, quite free from any kind of germicide. My fear of germs has steadily diminished; so that, if I could get them in sufficiently large quantities, and found them dry, elastic, and absorbent, I would willingly stuff my pads with them instead of wool." When peritonitis occurred after an operation, a rapidly acting purgative was given, and the peritonitis disappeared. In ten of his cases the tumors had undergone axial rotation, and were

gangrenous; under such circumstances the probabilities of a septic peritonitis, in some cases proving mortal, would seem to have been great.

It might be suggested, that while one hundred and thirty-nine ovariotomies were done, there were cases simultaneously occurring, in which Mr. Tait, after an abdominal incision, found it necessary to abandon the operation. But no, every operation was completed.

Doubtless Mr. Tait's success is to be partly attributed to the fact that many of the tumors were small. The day is not long past when ovariotomy was the last resort; the patient was dying from the tumor, tapping had been once or oftener done, numerous adhesions to the abdominal wall, to the intestines or other abdominal organs were present, and the desperate condition was the justification of that which then seemed a desperate remedy. Now, however, especially as taught by Mr. Tait through word and act, removal of the cystic ovary is the procedure first indicated. Further, one who has operated as many times as Mr. Tait has, must have acquired remarkable skill, ready recognition of peculiar difficulties, as well as of the means by which they can be met, and hence, in part, his great success. Further, nothing succeeds like success; one who has had such almost invariably good results, as he has had, thereby can impart to his patients faith and hope which are no mean factors in promoting recovery.

A SUGGESTION WITH REGARD TO INTRAMURAL CEMETERIES.

WHAT to do with disused burial grounds within our cities is a question that merits far more consideration from a sanitary standpoint than is usually bestowed upon it. The extension of our cities by growth of population has overtaken what were formerly suburban cemeteries and enclosed them as the centres of populated areas. The practice of interment, however, still continues, until at length the value of the land for building purposes and the greed of the speculator in real estate become instrumental in transforming these resting-places of the dead into the abodes of the living. Such a disposition of disused burial places is not uncommon, though in violation of sanitary law. These grounds, teeming with human remains in various states of decay, are surely not fit for building lots. The disturbance of the soil may have serious results. Moreover, it is not seemly or proper to expose rudely the remains of the dead and cram them at random into boxes to be deposited in other grounds.

The English Act of 1851, which was passed upon overwhelming testimony of the unhealthfulness of metropolitan graveyards, prohibited intramural interments and also prohibited the disturbance of the ground which had been so used, beyond one foot in depth, for twenty years. This was a great step in advance. And now we have the suggestion that the disused city burial-grounds be converted into gardens for sanitary reasons. Here is a cue for our legislators to make use of. The passage of a law prohibiting intramural interments and the disturbance of the grounds for a series of years, and their final conversion into public parks, will confer a lasting benefit upon the people.

The inhabitants of the crowded city need these open spaces. Their ruthless appropriation as building sites should be stopped at once. Many of these areas have been lost and cannot be reclaimed, but those that remain should be rescued from the builders' grasp and devoted to the uses of the public.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

Thirty-seventh Annual Meeting, held at St. Louis, May 4, 5, 6, and 7, 1886.

(Specially reported for THE MEDICAL NEWS.)

SECTION ON THE PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

TUESDAY, MAY 4.—FIRST DAY.

DR. ALFRED C. HAVEN, of Lake Forest, Illinois, read a paper on

THE ETIOLOGY OF DISEASE.

The origin of disease, the speaker said, has engaged the attention of man from prehistoric times. Superstitious ideas of disease were early prevalent, regarded as entities or punishments visited upon man by the gods. He objected to the theory that disease is the result of sin, because plants and the whole brute creation suffer together with rational beings. In order to understand all the causes of disease, man must master all the forces in the universe that may directly or indirectly influence vital phenomena. He has not yet mastered all these forces, and our knowledge of the causes of disease is as yet incomplete. Similar unsatisfactory causes are assigned to many different diseases—*e.g.*, exposure to cold. This and other vague terms were considered by the essayist, and our ignorance of the etiology of certain diseases was stated in its worst form.

The signs of better times are seen. As Tyndall has said, "Never before during the long period of its history did a day like the present dawn upon the science and art of medicine."

Owing to deficient knowledge of the causes of disease, we have not a perfect classification. The essayist preferred the classification of Richardson, into

1. Phenomena having their origin in causes which, in one or other form, are persistently present, are parts of the natural order of the universe, are inseparable from that order, and are therefore beyond human control.

2. Diseases having their origin in causes which, though springing out of nature in some unknown way, and though difficult of control, are, nevertheless, under an improving knowledge controllable.

3. All diseases due to old age.

4. Phenomena of disease dependent on such causes as modes of life and self-imposed acts of the person or community.

It is more than probable that a larger number of maladies owe their origin to phenomena forming part of the natural order of the universe than has formerly been supposed. Richardson found that the inhalation of ozone produced symptoms of a catarrhal nature, and Daniel Draper, of New York, has shown that pneumonia is most prevalent when ozone is abundant in the atmosphere. Does the chemical agent sustain a causal relation to the disease?

Reference was made to the influence of "overtaxing of the heat-regulating functions" of the body in hot weather, as also of the variations in atmospheric pressure. The researches of Pasteur and other bacteriologists were briefly alluded to.

Without entering much more fully into the discussion of the subject, the essayist concluded with a thrust at medical education in America, which he pronounced "a disgrace to our nation."

"We are on the eve of great discoveries," he added, however, "which bid fair to rob many diseases of their fearful destructive power, and to revolutionize the science of medicine, and especially our theories regarding the etiology of disease."

DR. WETMORE, of Illinois, remarked that one of the chief causes of disease is inattention to the laws of health. He thought, also, that we know too little about physiology to learn much of etiology, and closed his remarks with the unqualified assertion that too much attention is paid to microörganisms, which, in his own vocabulary, were termed "bugs."

DR. L. BREMER inquired whether the previous speaker had ever seen one of the "bugs" to which he referred, declaring that no person who had not done practical work in the field of bacteriology was entitled—or, indeed, capable—to express an opinion on the subject.

DR. BELL, of Kansas, desired proof that the microorganisms are the cause of a single disease.

DR. BREMER, good-naturedly, complied with the request, citing some of the well-known examples of inoculation experiment after successive cultivations.

DR. WETMORE again made a protest against the theory.

DR. LYNCH, of Baltimore, remarked that although there are strong evidences in favor of the truth of the germ theory, it is still far from demonstration. The theory entirely overthrows the definition of tubercle, claiming that every body in the organism that is capable of undergoing a peculiar transformation is a tubercle. Thus phlegmon, catarrhal inflammations, and proliferation of lymphatic glands are all claimed to be tubercle because we find in them the bacillus tuberculosis. The mistake arises from the assumption that wherever the bacilli are found they bear an etiological relation to the disease. It has been shown that in the beginning the bacillus is not present in scrofulous glands, while later truth is that the bacillus occurs, as a rule, in caseous glands, because the germ feeds upon this material.

Dr. Bremer, he continued, spoke of pure culture. What is pure culture? How can he know that a culture is absolutely free from other poison than that which is apparent? We know that it requires but an exceedingly minute quantity of a poison to develop a disease. Pasteur, for example, inoculated a succession of animals with attenuated virus, the last animal receiving a three-hundred-millionth of a drop of septic matter, and the animal died. Caseous matter, the speaker claimed, is poisonous, and will set up tuberculosis without the presence of a bacillus. Who can say, he concluded, that the body of bacilli do not contain enough of the original poison of the disease to set up the same process as existed before?

DR. FREDERICK N. HUSTON, of Maine, read a paper on

THE EFFECT OF CERTAIN PHYSIOLOGICAL PRINCIPLES THAT HAVE NOT BEEN NOTICED AND WHICH AID IN THE CIRCULATION OF THE BLOOD.

The author based his theory on the statement in the *Reference Handbook of the Medical Sciences*, that "blood has greater cohesion than water." Viscosity or viscidity, he said, is a property possessed in varying degree by all liquids. Cohesion amounts to the same thing as a physical force. Cohesion was then described as a force possessed of some very remarkable properties in its relation to the circulation.

No discussion was elicited.

DR. L. BREMER, of St. Louis, then read a paper on

ESSENTIAL VERTIGO.

Impairment of equilibrium accompanied by strange sensations of varying kinds and degrees, he said, is met with as a symptom not only of cerebral but of a great many other diseases, especially those of an exhausting and debilitating character. Beside the physiological vertigo produced by rapid rotatory movements or by a sojourn in high altitudes, temporary pathological giddiness or dizziness is not uncommon with many persons enjoying in other respects good health. In fact, there is scarcely an adult who has not at one or other period of his life experienced vertigo of some kind.

Whereas, then, vertiginous sensations may be said to fall within the boundary lines of health, they may constitute a well-marked disease and rise to the dignity of a pathological entity, if they are severe or persistent enough to interfere with the comfort or the occupation of the individual so affected. The moral effect of the same degree of vertigo varies much with the individual moral and mental disposition of the patient: an attack of vertigo of a certain intensity that will appear of the gravest importance to one, will by another be ignored, thought nothing of, and easily forgotten. Thus, the psychical and consequently physical effect of such an attack will tell more on the excitable than the phlegmatic. Children seem less disposed to the trouble than adults, or perhaps are less likely to speak about it than adults, who have an idea, however vague, of its seriousness.

The English expressions, giddiness, dizziness, lightheadedness, all of which are comprised in the term vertigo, signify a number of totally different affections; they are often used promiscuously by physicians and patients, and may mean loss of balancing power, simple fulness or pressure in the head, faintish feelings, temporary confusion of thought, or bewilderment and strange and indefinable sensations in the head in general.

The kind of vertigo which is the subject of the pres-

ent paper shows a tolerably well-defined and circumscribed clinical picture. The term "essential vertigo" was chosen as suggested by Nothnagel. It is the form which by others has been described as "idiopathic" or "simple" vertigo.

This affection must, in the present state of our knowledge, be classed with the neuroses, excluding those cases that are due to disturbances of vision, hearing, or digestion, to the gouty diathesis, epilepsy, malaria, cardiac trouble, acute infections, and organic diseases of the brain, intracranial tumors, atheromatous condition of the cerebral arteries, in short, all the so-called organic—*i. e.*, coarse pathological lesions of the central nervous system.

Although there are many variations of the disease, and, since the symptoms are chiefly subjective in character, ever changing according to the individuality of the patient, the essayist gave with much minuteness an average representation of the symptoms of essential vertigo.

The patient is generally, though not always, more or less anæmic looking, debilitated, and exhausted by overwork, excesses, etc., and experiences a strange sensation in the head, a feeling of emptiness accompanied by a loss of balancing power.

Prominent symptoms are those included in the various phobias. Essential vertigo is an affection preëminently attended by hallucinations, other psychical symptoms taking prominent part.

Essential vertigo must be distinguished from vertigo due to aural, ocular, or stomachal disturbances. This distinction is rendered all the more important on account of the frequency with which complications of sight, hearing, and digestion accompany essential vertigo.

Neither physiology nor pathology has done much to enlighten us in regard to the seat of the disease; we cannot as yet speak of an equilibrial centre. In man the equilibrium is maintained by a complex nervous organism composed of a number of afferent and efferent nerves and their central and peripheral terminations. The chief motor centre is the medulla oblongata. There can be no doubt that this, in connection with the subsidiary and local vasomotor centres, are particularly unstable in individuals who are in a state of exhaustion or neurasthenia.

The cerebellum is not, according to recent investigation, the exclusive coördinating or equilibrial centre, but it is one of reinforcement of the motor impulses, as they are transmissible from the psychomotor area to the voluntary muscles. Essential vertigo is generally brought on by a vascular constriction in those arteries which supply the middle portion of the brain—the recognized seat of the centre of equilibration. But this vasoconstriction is chronic, and with it a more or less permanent irritability and instability of the equilibrial ganglionic cells is brought about. In advanced and confirmed cases the highest sensory impressions suffice to bring on the vertigo without the vascular disturbance. The remote cause of essential vertigo is a neurotic disposition. The proximate causes are exhausting diseases, excesses of all kinds, the rays of the sun, overheated and badly ventilated rooms, indigestion, mental maladies, and, in a great many sections of the country, malaria. The last-named disease constitutes a fertile soil for the development and growth of all kinds of neuroses. Even after the malaria has been cured the malaria caused by it may persist. The seasons also play an important part in the production of vertigo. Moderately cold winter months, May and June, are the most favorable for the patient. The heat of the summer months has a prejudicial influence on them.

Treatment. The therapeutic measures must be reconstructive in character. The food and clothing must be carefully regulated. Only woollen garments should be worn. There is scarcely a case of vertigo without gastric disturbance, usually in the form of a nervous dyspepsia. Yet such a case cannot be called a *stomacho læso*, although the stomach, above all, has to be treated. Cold water is a useful and potent remedy. Hot and warm bathing have proved injurious. The bromides and quinia usually prove beneficial; iron generally aggravates the difficulty, although, judging *a priori*, it is indicated.

Owing to the anæmia that is almost universally present, arsenic is frequently useful. Amyl nitrite and ergot seem to exert no influence on either anæmic or hyperæmic vertigo. Electro-therapeutic measures in the hands of the essayist had failed completely.

Prognosis. As regards the duration of life, the prognosis is good, but a cure is not always to be anticipated. An individual suffering from essential vertigo may grow old without apparent effect being exerted upon the powers of life, but the constant alarm that is experienced is almost certain to develop physical and psychical disturbances of more or less severity. Loss of memory and confusion of thought are ominous symptoms. It would be a comparatively easy task to combat vertigo successfully were it not for the fact that we have in most instances to deal with individuals addicted to alcohol and tobacco, whose surroundings are unwholesome, and whose financial circumstances are adverse. However complete the success of treatment in a case may seem, there always remains a tendency to relapse. Like the sword of Damocles, vertigo hovers over the head of the predisposed, ready to descend upon the victim when least expected.

DR. A. B. ARNOLD, of Baltimore, remarked that the admirable paper of Dr. Bremer had given the best effort at the explanation of the cause of vertigo that he had ever heard. It is an unfortunate fact that a great many patients suffering from essential vertigo are neglected by physicians. We are all liable to consider them as accidental to indigestion, cerebral anæmia, or some more serious cerebral affection, as cerebral tumor, abscess of the brain, or syphilis of the brain, etc. It is of great practical importance, therefore, that we acknowledge and recognize a form of vertigo which is not incidental to affections of the stomach, the eye, the ear, but that depends primarily upon a disturbance of what we must now call the centre of equilibrium.

Regarding the treatment, the speaker expressed accord with Dr. Bremer's statement that the treatment of essential vertigo is exceedingly unsatisfactory. With regard to the bromides, he said that in his experience they were of little benefit, although they are frequently of great benefit in vertiginous epilepsy. It is to be hoped that physiologists will succeed in pointing out the seat of the disease.

DR. O. T. SCHULTZ, of Indiana, then read a paper on

THE USE OF SO-CALLED ANTIPYRETIC DOSES OF QUINIA IN TYPHOID PNEUMONIA.

He stated that the practice of administering large doses of quinia in pneumonia, introduced by the Germans as auxiliary to the cold bath, has gained much favor in America.

Yet quinia properly administered in large doses is a useful therapeutic measure in the treatment of pneumonia, and more especially of its typhoid form. This use of the remedy deserves greater attention not simply on account of its power to reduce temperature, but because of some power *sui generis* which quinia seems to exert on the disease process of essential fevers.

The effect of quinia in large doses on the various organs, particularly on the lungs, was then reviewed at length. The frequency of respiration, he said, is somewhat diminished, but the remedy has no power to prevent hyperæmia or to hasten resolution. It retards the development of œdema.

WEDNESDAY, MAY 5.—SECOND DAY.

DR. S. S. LAWS, of the University of Missouri, opened the session with a paper on the *Labors of the Scientist, Louis Pasteur.*

DR. PHILIP ZENNER, of Cincinnati, then read a paper on

VALUE OF THE KNEE PHENOMENON IN THE DIAGNOSIS OF THE DISEASES OF THE NERVOUS SYSTEM.

This phenomenon has been known to the profession since the simultaneous publications of Erb and Westphal, in 1875. Its clinical significance is attached to the fact, pointed out by Westphal in his earliest publication, that it is present in health, and is absent in locomotor ataxia, usually disappearing at the very commencement of this disease. It may, also, be absent in anterior poliomyelitis and neuritis, when the lumbar portion of the spinal cord, or its nerves, are the seat of disease. It has been found missing in many cases of diabetes mellitus, and is sometimes temporarily abolished in chronic alcoholism, and after attacks of diphtheria.

Various examinations have been made to determine whether it is ever absent in health. Bürger missed it in 32 of 1409 healthy men; Eulenberg in 4.8 per cent. of healthy adults, and over 5 per cent. of children; Bloch in 5 of 694 school children; Pelizæus examined 2403 school children, at first missed it in 6, but finally obtained it in every one. Jendrássik examined 1000 persons, chiefly adults, not suffering with nervous diseases, and elicited the phenomenon in all but one, a case of diabetes mellitus.

The author then gave his own observations, which embraced the examination of 2106 persons, all of whom were adults, and chiefly males. Of these, 1174 were inmates of various insane asylums, the others, excepting 100 in the medical wards of the city hospital, were mostly in apparent good health. Of this number, the knee phenomenon was abolished in 28, 5 of whom had fully developed locomotor ataxia, 12 were in the earlier stages of the same disease, while 11 manifested no other symptoms of disease of the cord.

The cases of insanity were treated separately, because Westphal had shown that in such cases the absence of the phenomenon, even when there are no other symptoms, is strong presumptive evidence of disease of the posterior column of the cord, and because of its special value in diagnosing the form of insanity. Of the 23 cases of insanity with abolished knee-phenomenon, 10 were cases of general paralysis, and in 2 it was doubtful whether there was general paralysis. This is a large number, considering the fact that there were, at the time, very few cases of general paralysis in the asylum, only a small number more than those here given. This factor gains more importance in connection with another clinical manifestation, the condition of the pupils. We find in many cases, both of locomotor ataxia and general paralysis, what has been termed reflectory rigidity of the pupils—they do not respond to light.

Moeli, Thomson, and Siemering found in 4000 insane 492 with rigidity of the pupil; 85 per cent. of these had general paralysis.

Of the 10 cases of general paralysis with abolished knee phenomenon reported by the essayist, 9 had pupil symptoms; of the 2 doubtful cases, 1 had pupil symptoms, while in the 11 other patients, only 2 had pupil symptoms. The absence of the knee phenomenon and the presence of reflectory rigidity of the pupils may, therefore, be of great assistance in making a diagnosis in an obscure case.

The author then spoke of the results he obtained in non-insane subjects. He examined 932 persons, not insane, in 5 of whom the knee phenomenon was abolished. Of these, 2 had other symptoms of locomotor ataxia, 1 was an old man of 94, with greatly atrophied tissues, and only 2 appeared to be in perfect health. It is possible that in the 2 latter there is already some incipient disease of the cord. But whether this be true or not, the presence of only 2 such cases in nearly 1000 is so insignificant as scarcely to lessen the almost pathognomonic significance of this phenomenon. The fact that the phenomenon is sometimes absent in other pathological conditions, does not lessen its diagnostic significance in locomotor ataxia, for the other conditions can usually be easily distinguished. In the author's experience it is not so frequently absent in diabetes mellitus as might be inferred from the results of some observers. Rosenstein missed it in 6 of 9 cases, and Bouchard of 19 of 66. The author had recently examined 5 such cases, and found it present in all. In 1 of these it was very slight, and difficult to elicit, but in this case there were many other symptoms of locomotor ataxia. The author, also, believed that it was not often absent in alcoholism. He had examined quite a number of such cases at the hospital, and had examined 404 men at the workhouse, many of whom were, doubtless, hard drinkers, but had not found the phenomenon absent in these cases, although in 2 of them it was very slight. When absent in chronic alcoholism it had been restored by the administration of strychnine. This remedy had no such effect in locomotor ataxia—at least the author had seen several cases of ataxia in consultation, where strychnine had been given, and where the phenomenon remained absent.

The author then spoke of the method of eliciting the knee-jerk. On account of careful examination not being made, it is very often said to be absent where it can readily be elicited. He has had occasion to ob-

serve this again and again, especially in cases of physicians themselves. The ordinary method of having the patient cross one knee over the other and then strike the ligamentum patellæ, will answer in most persons; but in many it will fail. In that case, the person should sit upon a table with legs dangling, and knees entirely exposed, and then the ligament be struck on every part. In a small number there will still be failure by this method. For such cases, Jendrássik has recently pointed out another method, which enabled him to get his remarkable results given above, an absence of the phenomenon in only one of a thousand persons. The subject is seated as above, and, while the examiner strikes upon the ligament, he is requested to link the bent fingers into one another, and pull energetically. Doing this increases the muscular tonus and the response is very much increased. It was by this method that of the 2403 children examined by Pelizæus, the phenomenon was finally obtained in one in whom it could not otherwise be elicited, and this method enabled the author to obtain the results given in this report. He succeeded in eliciting the phenomenon by this method in quite a number of cases where he could not obtain it by the ordinary method. He did not keep a record of the number, but Jendrássik obtained it in fifteen of his thousand cases by this method, when he failed by the ordinary method. So great is the difference in some cases that the author was lead to believe that he might thus elicit the phenomenon in locomotor ataxia. So he again examined a number of cases of that disease, in which he had previously failed to elicit it, but found it still absent, notwithstanding the employment of Jendrássik's method.

In some of his cases the phenomenon was very slight and difficult to obtain. Whether this has a pathological significance it is difficult to say, although this reaction was found in a number of persons in apparently perfect health. In other cases in his case-book and not included in the figures given in this report, this slight response seems to have a pathological significance, as it is present with other symptoms of incipient locomotor ataxia.

Is the phenomenon always absent in locomotor ataxia? Westphal, in his earliest publication, stated that it was always absent in typical cases of this disease; it was absent wherever the disease affected the posterior columns in the lumbar region, and this occurred usually at an early period. Since then, various observers have reported cases in which it was present, and Hirt recently reported such an observation with post-mortem examination. Westphal has also quite recently reported some cases in which the phenomenon only disappeared at a late stage of the disease. Nevertheless, its absence is so rare as to affect very little the diagnostic sign ficance of the phenomenon. The essayist had seen a large number of cases of locomotor ataxia, and had never seen it absent but once in a case where the disease had advanced to the stage of ataxia, and in this case the appearance was rather that of a diffused myelitis, than of a systematic disease of the cord. He had a number of cases at present under observation, where the phenomenon was abolished on one side and difficult to elicit, but these were all still in the earlier stages of the disease.

DR. JOSEPH JONES, of New Orleans, then presented *Some Observations on the Results of Medical Treatment* in the Charity Hospital, at New Orleans, during sixteen years 1869–1886.

They related chiefly to the methods employed in the treatment of various diseases, especially those peculiar to the Southern climate. The treatment of malaria was made the subject of minute consideration. The address closed with a tabulated statement of the number of cases of the various diseases treated, and the result of treatment.

DR. A. F. PATTEE, of Boston, then read a short contribution on

POTASSIUM CHLORIDE.

Formerly it was generally believed that corresponding salts of potassium and sodium had the same physiological and therapeutical properties, and that it was a matter of indifference which salt was used. Important and well-defined distinctions do exist, however, between the two salts. In the body the potassium chloride is found in the tissues, cells, and blood corpuscles, while the sodium chloride is found almost exclusively in the fluids, the blood-serum, lymph, and bile.

He had used potassium chloride in many cases of anæmia with success, after other remedies had failed. He had found it of benefit, also, in the first stage of hepatic cirrhosis due to alcoholic excess. Inflammatory exudations with effusion of lymph, particularly pelvic cellulitis, have quickly disappeared under its administration. Glandular enlargements, also, subside. In stomatitis it is equal in efficacy to the chlorate. He had used it, also, in ovarian neuralgia and menstrual headache accompanied by insomnia, and had found it more reliable than the bromides. Combined with corrosive sublimate, it is one of the best remedies for syphilis. The tincture of the chloride of iron is also rendered more effective by the addition of this salt.

In the treatment of cellulitis he had given the remedy in the dose of ten grains every three hours, sometimes more, sometimes less. Regarding its use in epilepsy, he had found it most serviceable in anæmic cases. He had used it in cases in which the bromide of sodium had produced alarming depression. He had never used it in goitre.

DR. JOHN A. OCTERLONY, of Louisville, then read a paper on

THE CLINICAL ASPECTS OF MALIGNANT RENAL DISEASE.

He considered, first, the rarity of the disease, then its symptomatology and etiology.

The diagnosis of renal cancer is often fraught with difficulty. Cancer of the stomach, of the liver, enlargement of the spleen, mesenteric tumors, hydronephrosis, cystic degeneration of the kidneys, uterine and ovarian tumors, abdominal aneurism, have all been confounded with renal cancer. Several tables, setting forth the differential diagnosis of the affection were given, among them the following:

Cancer of the stomach.	*Cancer of the kidney.*
Vomiting the rule.	Generally absent.
Hæmatemesis.	Very rare.
Hæmaturia absent.	Generally present.
Tumor in epigastrium.	Tumor in one or other flank.
Tumor small.	Often very large.
Tumor movable.	Generally fixed.
Tumor descends with diaphragm.	Does not descend.

Enlargement of spleen.	*Renal cancer (left kidney).*
Absence of descending colon in front of tumor.	Descending colon may be found in front, vertically dividing the tumor.
Border of tumor often thin, smooth, rigid, but not rounded.	Irregular nodulated, rounded, not thin.
Extends upward under the ribs.	Does not extend upward.
Direction of tumor downward and inward.	Chiefly downward toward iliac fossa.
Very movable.	Generally almost or quite immovable.
History of malaria or leucocythemia.	Such history absent.

Hydronephrosis.	*Renal cancer.*
Generally unilateral.	Generally unilateral.
Tumor soft.	Hard or irregularly soft.
Fluctuating.	Rarely or irregularly so.
Tumor liable to subside suddenly at times with copious discharge of urine.	Tumor permanent.
Tumor not likely to reach excessive development.	Tumor often attains enormous size.
Movable.	Generally fixed.
Descends with diaphragm.	Does not do so.
Slow growth.	Rapid growth.
No cachexia.	Cachexia present

DR. J. W. MCLAUGHLIN, of Austin, Texas, then presented some

RESEARCHES INTO THE ETIOLOGY OF DENGUE.

The epidemic of dengue which prevailed throughout the State of Texas, during the fall of 1885, he said, was unusual in many respects. 1. In its universality. 2. In the violence of its symptoms. 3. In its manifest contagiousness. 4. In the protracted convalescence of its subjects. 5. In its hemorrhagic tendencies. 6. In its numerous sequelæ.

In the city of Austin about 16,000 cases of dengue occurred during this time, out of a population of about 22,000 inhabitants. Other sections of the State were reported as having suffered as severely.

Many cases where direct contagion was the cause of this disease, came under the observation of the writer. There can be no doubt that by this means it was carried and spread from one neighborhood to another, and from the city to the country by infected individuals.

The violent type of the disease, the protracted convalescence of its victims, and its many sequelæ were unusually prominent in this epidemic. The first, by the suddenness of its invasion, often with an initial chill, its pyrexia, its excruciating pains, nausea, and the constancy of its exanthemata. The second, by the mental and physical prostration which follows its defervescence; this often continues for weeks or months with anorexia and languor. The sequelæ most frequently observed were dysentery, enterocolitis, nephritis, bronchial and gastric catarrh, abscesses, glandular enlargements, and eruptions of the skin.

It would seem, from the peculiar clinical history of dengue and its epidemic character, that it is a specific disease, that microörganisms are the source of its infection and that these microörganisms find in the blood a suitable environment for their growth and multiplication.

In order to determine the correctness of this theory, and, if possible, to obtain information with reference to the etiology and pathology of this malady; the following investigations were made: 1st. Blood was obtained from living subjects during the various stages of dengue and microscopically examined directly—*i. e.*, without the addition of chemical reagents. 2d. After-treatment with such agents, viz., glacial acetic acid—with and without dilution—caustic potash in strong and weak solutions, chloroform, and ether. 3d. The blood was dried upon sterilized cover glasses, and subjected to the action of the various staining agents. 4th. Dengue blood obtained from living subjects was introduced into test tubes containing sterilized culture media prepared for this purpose; these were closed with sterilized cotton plugs and kept at 100° F., for the growth and multiplication of those organisms which were contained in the blood. 5th. Blood was drawn directly from the veins of a dengue subject into a series of sterilized glass bulbs, united by a capillary glass tube. This was done in such a manner as to guard effectually against the introduction of all foreign germs. The series of bulbs were then put into an incubator, and kept at 100° F. 6th. The matters vomited and urine passed by dengue subjects were microscopically examined.

The following are the results obtained: In the blood examined directly or after treatment with the chemical agents named, stained or unstained, there were found, often in great numbers, in the cell elements as well as in the plasma, micrococci, about one-twentieth to one-thirtieth the size of the red cells, spherical in shape, and red or pinkish in color, often surrounded by gelatinous capsules. He always succeeded in growing in culture tubes upon the surface of the culture jelly, micrococci, and no other form of bacteria which, in size, color, shape, and behavior, are identical with those seen in fresh dengue blood. The blood contained in the series of glass bulbs was examined; the first bulb at the expiration of six weeks, the other after three months. He found the blood to contain a pure culture of micrococci which, in all respects, were identical with those previously seen in fresh blood, and grown upon culture jelly.

THURSDAY, MAY 6.—THIRD DAY.

DR. HERBERT F. WILLIAMS, of Brooklyn, presented a paper on

PNEUMATIC DIFFERENTIATION, WITH DEMONSTRATIONS WITH THE PNEUMATIC CABINET.

He referred to the great importance of local treatment in tuberculosis, according to the germ theory, and he claimed the possibility of carrying medicaments into the alveoli by this means.

Referring to the results of treatment with the cabinet, he stated that the hopes at first entertained for it had been fully sustained by the observations of competent men in all parts of the country. No climatic influences could account for the results obtained, for the cabinet had been used with the same results in all climates.

The use of the instrument was recommended also in the convalescent stage of pneumonia. Many patients die, it was claimed, from a mere inability to draw pure air into the lungs in sufficient quantity to sustain life, hence the cabinet, by giving this ability, is capable of sustaining life. In atelectatic conditions of the lung, resulting from compression by pleuritic or other effusions, the pneumatic cabinet is indicated for the expansion of the lung, so frequently not fully attained by the powers of inspiration alone.

The discussion of the merits of the apparatus was

participated in by Drs. E. Fletcher Ingals, of Chicago, Mulhall, of St. Louis, McCaskey, of Indiana, Houghton, of Chicago, Scott, of Ohio, Wright, of Illinois, and Whittaker, of Cincinnati. Those who had used the apparatus were, for the most part, favorable to it; those who had not were inclined to doubt its ability to accomplish all that was affirmed of it. The last speaker was probably the most sanguine in his hopes for its success. He spoke after a year's experience with it, during which time he had treated at least sixty cases of tuberculosis. It is indicated chiefly, he said, in the initial stage, when one of the greatest demands is a thorough ventilation of the lung cells. One requirement remains to be perfected in the apparatus, he said, and that is to make the respiratory movements more like those of natural respiration. While the speaker did not place the pneumatic cabinet in comparison with a resort to healthful climates, like that of Colorado, he realized that it placed within the reach of a vast majority of persons, who are not able to change their residence at will, the next best means of treatment.

DR. H. H. PATTON, of Dayton, Ohio, then read a paper on

PNEUMONIA IN THE OLD.

He expressed the opinion that, while pneumonia frequently attacks persons in vigorous health, the old and persons debilitated from any cause are its most common victims.

As Surgeon to the National Military Home, he had acquired some interesting statistics of hospital practice in that institution. There are in the institution about 5000 inmates, who are well advanced in life, and more or less disabled by wounds and diseases incident to the exposures and hardships of army life. Many of them are of dissipated habits, and scores of them were brought in who had been lying for hours on wet ground exposed to storms, and yet it was the common observation of the medical attendants that they did not take pneumonia. In his opinion pneumonia is rarely, if ever, produced by chilling of the body.

He called attention, also, to the latency of the symptoms, and the liability of the disease to be overlooked when attacking the aged. It rarely begins with a chill. Cough, pain, and expectoration are absent in the majority of cases. Generally there is a slight flush of the face, some rise of temperature, and increase of pulse and respirations, but these symptoms are not usually sufficiently pronounced to attract attention, unless the attendant is carefully looking for febrile reaction. Old men with pneumonia affecting one lobe are frequently so little ill that they do not consult a physician; but if a second lobe is invaded, they usually sink rapidly and die.

At the Home, within the last six months, sixty-three cases of pneumonia in members beyond eighty have been received into the hospital. Thirty-six of them died. A majority of the fatal cases were complicated with other serious maladies, but pneumonia was the immediate cause of death. During the same period fifty-three members, over sixty, died of all other causes. Seven cases were double pneumonia, and in fifteen cases different lobes were invaded, at intervals of from twelve hours to four days. In thirteen of these cases the disease began at the base of the lung. In every case over seventy death promptly followed secondary extension of the disease, or the invasion of another lobe.

In conclusion, he called attention to the unexpected suddenness of death in many cases, and said that the examinations made in the dead-house had revealed the fact that pneumonia had been the most common cause of sudden death in the old at the institution with which he is connected. Of seven sudden deaths that have occurred there within the last six months, one was due to hemorrhage of the lungs, one to calcareous degeneration of the aortic valves, and five to pneumonia. Two of the cases were complicated by serious heart lesions.

PRIZE ESSAYS.

The committee appointed to examine and award a prize on the best essay contributed for that purpose, reported that only one essay had been received, and that, although this contained many points of merit, they did not consider it of sufficient practical importance to justify them in awarding a prize.

Adjourned.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

Eighth Annual Session, held in the Hall of the College of Physicians of Philadelphia, May 27, 28, and 29, 1886.

THURSDAY, MAY 27.—FIRST DAY.

THE PRESIDENT, DR. HARRISON ALLEN, of Philadelphia, called the meeting to order at ten o'clock, and after delivering an *Address of Welcome* read a paper entitled

TWO INSTANCES OF ADENOID DISEASE OF THE ROOF OF THE PHARYNX WHICH EXHIBITED UNUSUAL FEATURES.

The following cases were related as presenting certain points of interest:

Case I.—A. B., aged five years, much emaciated, without appetite, suffering with frequent attacks of indigestion, was sent to the speaker in the latter part of January, 1884. Examination showed the roof of the mouth to be elevated. The irritation was so extreme that the slightest attempt to depress the tongue was followed by gagging. The nostrils were filled with a mucoid discharge, and a small quantity of a similar discharge was seen in the fauces after gagging. During the day the respiration was not exceedingly difficult, but at night it was greatly impeded. Almost directly after the child fell to sleep respiration became labored. After three or four inhalations the breathing would cease, and the child would open its mouth and make strenuous efforts to inspire. It would then awaken and a forced inspiration ensue. After this it would quickly fall to sleep and the same phenomena would recur, and in this manner the entire night would be passed. To these symptoms were occasionally added fits of crying and emesis. During an attack of whooping-cough the symptoms became much intensified and were associated with irregular action of the heart.

Hypertrophy of the adenoid tissue of the pharynx with unusual reflex phenomena was diagnosticated. On January 29, with the patient under ether, the operation for the removal of this tissue was performed. An attempt was made to break it down with the finger, but this arrested respiration. Efforts were then made to

rasp the growth away with an instrument passed through the nose, but in a short time the patient showed symptoms of depression and the operation was suspended. The pharynx was next seared with the hot wire. During the succeeding five weeks applications of iodine and glycerine were made, but there was no evident improvement in the breathing at night. The patient was again etherized and the pharynx shown to be empty. Suspecting that the tonsils might be the cause of the difficulty, a portion of each one was excised. Still no improvement followed. A third attempt to detect the cause of the difficulty was made, and it was determined positively that the nostrils were patulous. A careful examination showed that during sleep the tongue fell backward, and that this was the essential condition. It was then directed that when these attacks came on, the boy should be held with the face downward. The moment this position was assumed the child passed into a profound slumber. It was then so arranged that during the entire night, the patient should be watched so that the tongue should not have an opportunity of falling back. This watching has been continued up to the present time. The boy prefers to lie on his side, but when the attack comes on turns on his face without awakening. He is now a strong and healthy boy.

Case II.—A girl, six years of age. The irritability of the pharynx was excessive. The patient had been twice operated on by other surgeons, and it was inferred that an attempt had been made to remove the morbid tissue. The patient was etherized with great care and the entire nasal pharynx found to be much smaller than normal, and its roof highly arched. The posterior slope of the roof was the seat of an adenoid growth. Some portions were removed by the galvanocautery passed through the nose. Some of the nodules at the lower border of the pharynx were removed with the scissors.

The patient was improved, and two weeks later she was again etherized, and it was ascertained that all the nodules had been removed, but that the membrane at the roof of the mouth was exceedingly thick and tended to obstruct the passage of air. This was subjected to cauterization in several places. No further efforts were made to reduce the size of the membrane by operation, and the patient was treated as a case of perverted nutrition of the osseous system. Iodine and glycerine were applied locally. Under this treatment gradual improvement in the nasal respiration took place, and at the present time the child appears to have perfectly recovered.

DR. F. H. HOOPER, of Boston, said that he had met with only one case in which any accident followed the operation for removal of adenoid tissue. This was in the case of a little girl eight years of age, of a neurotic temperament, and very precocious. Nasal respiration had been obstructed and articulation had been defective since the age of three years. Hearing was also impaired. A large quantity of adenoid tissue was demonstrated. The removal of this was followed by great improvement in breathing and articulation. The breathing did not improve at once, but the use of the Politzer bag resulted in marked improvement. This had been formerly tried without effect. From this time she began to grow nervous. A short time after the restoration of hearing, symptoms of chorea developed and gradually increased in intensity. The speech became affected, and for over a month she was unable to speak. The chorea assumed an exceedingly severe form; she was unable to sleep. Various remedies were tried without benefit. Finally, urethan was suggested. The use of this drug was followed by quiet sleep. Since this time the child has continued to improve and the chorea has now entirely disappeared.

DR. E. L. SHURLY, of Detroit, referred to the danger of the ether taking fire when this is used as the anæsthetic. He always used chloroform under such circumstances.

DR. S. W. LANGMAID, of Boston, referred to the interruption of respiration as an important point. In one case, coming under his observation, there was a period of thirty-five seconds between the respirations. In that case the difficulty was relieved by the patient getting on his hands and knees. This corresponded with the case related. There must have been either a falling back of the tongue or some inhibitory action of the respiratory centre. The removal of the growth did away with the interruption of respiration. He was not aware that much had been said in regard to this interruption.

DR. C. SEILER, of Philadelphia, referred to the effect of adenoid growths in the roof of the pharynx upon the singing voice. Dr. Bosworth, of New York, had called his attention to the fact that different lines might be drawn on the roof of the pharynx corresponding to different notes of the scale. A swelling in a particular situation will interfere with the production of a certain note. A case illustrating this was seen by the speaker a short time ago. A young lady could not reach the upper notes of the scale. He found a small adenoid growth which he removed with the finger. The patient is now able to reach every note with the greatest ease.

DR. HARRISON ALLEN said, in closing the discussion, Dr. Hooper's case is an evidence of the way in which the adenoid growths may affect the entire system. His case is noteworthy, in view of the fact that the phenomena appeared after the removal of the growth. With regard to the use of ether, he had not been unaware of the danger, but by fanning the patient for a moment before using the cautery the vapor of the ether is removed, and he had experienced no difficulty. His early teachings had caused him to be afraid of chloroform on account of its depressing effect upon the heart. He had been unable to find on record a case similar to the first one narrated. Dr. Langmaid's case agrees with it in that the difficulty was relieved by change of position. In a case similar to the one related by Dr. Seiler, he had removed a small mass of adenoid tissue, and although the patient was able to reach the higher notes, she complained of the sensation of a large cavity in the situation from which the mass was removed.

PROF. RAMON DE LA SOTA Y LASTRA, M.D., of Seville, Spain, presented, through Dr. J. Solis Cohen, a paper on

LUPUS OF THE THROAT.

The author referred to the difficulty of diagnosis which was experienced in many of these cases, and in illustration related the following: In 1884, he was consulted by a physician on account of an affection of the throat. The patient was much emaciated, reduced in strength, and with a clay-colored complexion. He was sixty years of age. The trouble of the throat had commenced one year previously. He was unable to swallow anything but milk and broths. The tongue was covered with

psoriatic scales. The pharynx was lumpy and of a wine-red color. The right tonsil was the seat of an ulceration extending from the pyriform fossa below to the middle of the uvula and involving half that structure. Its borders were red and swollen, its surface lumpy and irregular, and of a hard and elastic consistence. Some pain was produced by palpation, but no bleeding. There was no trouble while talking or coughing. Liquids were swallowed without difficulty. Breathing was accomplished with perfect freedom. The submaxillary glands were swollen. The patient had suffered from rheumatism, but no history of syphilis could be obtained. Taking into consideration the history of the case and the age of the patient, he considered it an ulcerated epithelioma. This was concurred in by the patient's physician. Nevertheless, mistrusting the testimony obtained, antisyphilitic medication with mercurials was tried. This occasioned such bad results that it was necessary to suspend it. He was then placed upon the use of iron and bitter tonics and such diet as he could take. The specific treatment was subsequently resumed, but the local lesion assumed such a bad aspect, that it became necessary to give up the treatment. From the fact that the ulceration was unattended by pain he began to have some doubts as to its epitheliomatous nature. He next prescribed sodium arsenite in ascending doses, with a gargle of resorcin and the use of iodoform on the ulcerated surface after it was washed with a solution of borax. For a month the ulceration continued to extend, and when he had lost all hope, it stopped its progress and became covered with healthy granulations. Cicatrization went on and was complete in three months. The scar is irregular, elevated and depressed, hard and soft, the posterior portion being adherent to the pharyngeal wall. The lingual psoriasis continued. Restoration to health has taken place. It is now eighteen months since the ulcer healed. With this result he concluded that the case was one of lupus.

His experience with this and other cases of lupus of the throat has led him to conclude that the disease may make its appearance at any period of life. He has seen it more frequently in adults than in children, and more frequently in men than in women. He has been unable to obtain any information in regard to inheritance. He has not found that heavy drinkers or smokers are more liable to suffer, nor has he found that great exertion of the voice or exposure to irritating substances, the application of the cautery or other agents, had any influence in its production.

He has never had an opportunity of observing the initial manifestations, but he has been able to detect the involvement of sound tissues later in the disease. Sometimes the mucous membrane assumes a purple color, and swells up and becomes granulated. Then one or two nodules may develop, and may attain the size of a pea. Sometimes they become prominent without any alteration in the appearance of the mucous membrane. They may remain superficial, or they may attack the mucous tissue, and also the submucous tissue. Their form is rounded and their surface is smooth. These nodules are distinguished by their rosy-red color from leprous tumors. Unlike carcinoma, the tumors are usually quite distinct. On pressure, they present an elastic resistance. This is greater than the hardness of inflammation, but less than that of epithelioma. The parts on which the tumor develops become rigid, and the natural movement is diminished or lost. Contrary to carcinoma, which usually produces sharp lancinating pain, and to leprosy, which is generally accompanied with anæsthesia, there is in lupus no alteration of the sensitiveness of the part. After a longer or shorter period, the tubercle softens and becomes ulcerated. The ulceration assumes two forms. In some cases the tumor becomes excavated to a considerable depth, while in others it is more superficial. These ulcers do not bleed on pressure. The cure is difficult, and attended with the formation of scars. In some cases these ulcers develop in a slow way, while in others they start with astonishing rapidity. They may develop within a few days, or they may remain quiescent for months or years, and then take on destructive action. The healing of the ulcer is followed by the formation of irregular scars, raised in some places, depressed in others, red in the former, white in the latter. Adhesions to different parts take place. Cicatrization takes place slowly, and is easily destroyed. Infiltration always remains.

All agree that the cure of lupus of the throat is more difficult than the same process in the skin. In the cases which he has seen, the same treatment which he has employed in external lupus, has been found of service in lupus of the throat. He does not despise internal treatment, but uses such remedies as are indicated by the general condition of the patient. This has an important influence upon the result of topical treatment. If the lupus is not ulcerated, he applies caustic substances. Until a few months ago, he used tincture of iodine, but has, however, found good effects from the use of lactic acid. He has used it in cases of lupus of the cheek and gums, and also of the larynx, and has met with no inconvenience from its use, except the pain, which varies in different cases. If the lupus is ulcerated, he sometimes uses the lactic acid; more frequently he employs a wash of borax, and covers the ulcer with powder of iodoform. He always prescribes a gargle of a one per cent. solution of resorcin. Patients thus treated have always recovered after a greater or less time. In some cases the cure has probably been realized in the natural course of the disease, rather than as a result of the therapeutic measures.

PROF. JOSEPH LEIDY, of Philadelphia, on the invitation of the Council, made some remarks on interesting points connected with the larynx.

The first point to which he referred was the aperture of the larynx. This aperture, communicating with the pharynx, is a large oblique opening, bounded above by the summit of the epiglottis, and laterally by the arytenoepiglottidean folds. The lower portion is formed by the notch of the arytenoid cartilages. Laterally on each side, two eminences are quite prominent in the fresh larynx, an upper pair and a lower pair. The lower pair is produced by the carunculæ of the larynx, which terminate the summits of the arytenoid cartilages. The text-books state that immediately above these there is another pair of cartilages. These are the cartilages of Wrisberg. In his experience, he has rarely found these cartilages decidedly developed in the white subject. Where a prominence exists in the white subject, it is caused by a group of glands. Often in these a little cartilage may be found. In the negro, the cartilages of

Wrisberg are conspicuously developed. This fact has also been mentioned by European observers.

The next point refers to the vocal cords, as they are usually designated. These are described as two elastic ligaments extending from the entering angle of the thyroid cartilage directly backward and upward, to be attached to the vocal process of the arytenoid cartilage. Between these cords is the narrowest portion of the larynx, or the fissure of the glottis. While physiologically it is correct to speak of the vocal cords, yet, anatomically it is not correct to speak of vocal cords. These bands are usually spoken of as the inferior thyro-arytenoid ligaments. There is another ligament extending between the thyroid and cricoid cartilage in front and extending back to the base of the arytenoid cartilages. This is described as the middle crico-thyroid ligament. This is connected with the upper border of the vocal membranes; a connection which is very important. If the cricoid cartilage is broken or crushed, it must influence the action of the so-called vocal cords, for the vocal membranes are connected quite as much at the lower border to the cricoid cartilage as they are at the upper border to the thyroid cartilage.

The vocal cords are influenced altogether by the muscles attached to the arytenoid cartilages. These are supplied by the inferior laryngeal nerve. Another muscle which may influence the movements of the vocal membranes is the crico-thyroid. This is supplied by a separate nerve—the superior laryngeal. Why this muscle should be supplied by a different nerve has not been satisfactorily explained. The muscles which operate the arytenoid cartilage are the posterior crico-arytenoid, the lateral crico-arytenoid, and the arytenoid muscle. These muscles are sufficient to produce all the movements of the vocal membranes. Other muscles —that is to say, the aryteno-epiglottidean and the thyro-epiglottidean muscles—have been described, but the development of these muscles is exceedingly uncertain.

Another point is in regard to the connection of the muscles. In looking at the origin of muscles, we usually consider that they are attached to the surface over which they lie—for instance, we look upon the posterior crico-thyroid as arising from the posterior lateral surface of the arytenoid cartilage. If the muscle is cut across, we find that it arises only at the most remote portion of this surface. Between this and its insertion there is a smooth surface.

Specimens illustrating these points were presented.

A vote of thanks was tendered Prof. Leidy for his communication.

DR. J. SOLIS COHEN remarked that he had noticed that the cuneiform cartilages are best developed in those who have the best control over the voice. He regarded them as supports for the ventricular bands, supporting them in the same manner as the ribs support the tissue of an umbrella. The connection of the crico-thyroid membrane with the vocal cords is very interesting. There are two so-called paralyses of the larynx which present exactly the same picture. One is the paralysis of the thyro-arytenoid muscle, giving the "Indian-bow paralysis" of the Germans. The other is paralysis of the crico-thyroid muscle, giving exactly the same appearance. The way to distinguish these paralyses is by placing the finger on the crico-thyroid membrane. If the membrane vibrates when the patient speaks, the crico-thyroid muscle is not paralyzed. With reference to the action of the crico-thyroid muscle, he stated that in phonation the thyroid cartilage is fixed, and when the attempt to sound high notes is made, the cricoid cartilage is drawn up by this muscle. The posterior crico-thyroid muscle from its attachment, not only separates the vocal bands, but when they are made tense by other muscles, its action is to increase their tension.

DR. F. I. KNIGHT, of Boston, thought that the demonstration of the attachment of the vocal bands to the cricoid cartilage, solves the problem in regard to the impairment of the voice after laryngotomy. When operations are limited to the thyroid cartilage, the voice is usually not impaired, while if the cricoid cartilage is the seat of operation, the voice is always impaired.

DR. F. H. HOOPER, of Boston, remarked that a short time ago an Irishman, fifty years of age, in whom the cartilages of Wrisberg were enormously developed, came under his observation. His larynx looked very much like that of the dog. In the dog there is a muscle attached to these cartilages, corresponding to what we would call the dilator of the ary-epiglottic fold in man. If this muscle in the dog is stimulated, the cartilage is rotated outward. He agreed with Dr. Cohen with reference to the action of the crico-thyroid muscle.

DR. LEIDY had never been able to see that the crico-thyroid muscle was related to the other muscles in the production of sound. He was glad to hear the explanation which had been given, and which appeared to be a satisfactory one.

DR. J. N. MACKENZIE, of Baltimore, exhibited an instrument for *Fracturing the Nasal Septum*, the chief difference from other instruments of the same class being the great leverage which was obtained.

DR. C. SEILER exhibited an apparatus to be used in making *Sections of Frozen Heads*. Sections made with the machine were exhibited. It is possible to electroplate these sections, which will preserve them indefinitely. After electroplating, the specimen may be heated and the tissue removed. Then by pouring wax into the mould, a cast exhibiting all the anatomical figures of the original specimen will be obtained.

DR. C. E. SAJOUS, of Philadelphia, presented a *Galvanocautery Handle*, in which the wires were attached in the middle of the instrument, and both the wires and the electrodes were secured without the use of screws. The connections within the handle were made of copper, and heavier than usual in order to diminish the resistance.

DR. J. H. HARTMAN, of Baltimore, exhibited a form of *Écraseur* with extremities of different shapes, which could be used for various purposes.

THE PRESIDENT announced the following as a Nominating Committee: Dr. T. R. French, of Brooklyn; Dr. F. I. Knight, of Boston; and Dr. G. W. Major, of Montreal.

The morning session was then adjourned.

(*To be continued.*)

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, March 25, 1886.

THE PRESIDENT, J. C. WILSON, M.D., IN THE CHAIR.

DR. H. F. FORMAD presented the

RECORD AND CLASSIFICATION OF 143 CONSECUTIVE FATAL CASES OF INTRACRANIAL HEMORRHAGE OBSERVED IN MEDICO-LEGAL PRACTICE AND IN PRIVATE AUTOPSIES, IN THE CITY OF PHILADELPHIA.

He made some remarks on the different forms of intracranial hemorrhage he had observed, and presented a number of specimens in illustration. There exist, he said, no well-defined descriptions of the various forms of intracranial hemorrhage with reference to their etiology, and no classification that could be of any service in medico-legal examinations, and he suggested the classification and observations presented below as particularly adapted to the latter purpose. These records may also be of use to the surgeon who wishes to trephine. The observations were sufficiently numerous to warrant conclusions of importance for various ends. Dr. Formad regretted that he met his cases on the autopsy table only, and hence was unable to offer clinical details. In some cases the history was far from being reliable, and in a few the history was left to conjecture from the surroundings, the circumstances of the case, and the appearance and general lesions of the body. Dr. Formad wished to give credit to his colleague in Coroner's work, Dr. R. R. Stewart, whose assistance in these observations he enjoyed, and also to his assistants Drs. A. J. Plumer and George H. Chambers. Dr. Formad's cases of intracranial hemorrhage embrace the results of the various kinds of head injuries (traumatic) and cerebral apoplexies (idiopathic hemorrhages) as well. By the term cerebral apoplexy, he meant exclusively hemorrhage in the brain, and did not refer to "congestive," "serous," "embolic," or "nervous" apoplexies and other affections which tyrannic nomenclature has thrown together under the term "apoplexy."

Idiopathic cerebral apoplexy should also be strictly separated from traumatic cerebral hemorrhage (this is not done by many writers). The latter can be further subdivided into very well defined subvarieties of hemorrhages each etiologically distinct, as will be shown below. These observations will clearly show the necessity and usefulness of a classification such as suggested. There should never be any reasonable doubt at the post-mortem table as to whether a cerebral hemorrhage was due to disease or to injury, or to both combined; nor as to whether a head injury preceded or followed an intracranial hemorrhage. He believed that the diagnosis between the conditions just stated was much more difficult during life. He had seen errors made by foremost surgeons and physicians and in the best hospitals in the city. He had seen cases of apoplexy diagnosticated as fracture and trephined, and he had seen cases of fracture of skull unrecognized and untouched, left to die in the medical wards.

Upon the post-mortem table, however, there should be no difficulty in diagnosticating such lesions in the present status of morbid anatomy as a distinct and well-defined science. After sufficient accurate observations have been made and after seeing conditions repeat themselves, case after case alike, and having in the majority of instances cause and effect directly before the eyes—one should be enabled in disputed cases to make a post-mortem diagnosis which leaves but little room for doubt.

Dr. Formad divided the cases of intracranial hemorrhage observed by himself into the following eight different classes; the accounts being given here in abstracted form.

Class I.—12 Cases.

Post-mortem appearances: One or more small hemorrhages in the fasciculi teres in fourth ventricle; also ecchymoses in the lining of the other ventricles (no massive hemorrhage anywhere); cerebral substance, as well as membranes, intensely congested; cranium much congested; drops of blood oozing from cut surface and from all over periosteum. Marks of contusion in scalp, with more or less ecchymoses, noted in all cases.

Histories: In two cases death was caused by electricity (details will be recorded elsewhere). Ten cases revealed histories of concussion of brain from injuries to head, without fracture of skull. Death was rapid or sudden from shock in all these cases. Six were males and six females; the majority were young persons.

Class II.—23 Cases.

Post-mortem appearances: Massive hemorrhages (blood-clot) of various sizes found between pia and dura mater; location, in the majority of cases, about opposite to places of application of violence. In none of these cases was this meningeal blood-clot located immediately beneath the point of application of violence. Ventricular ecchymoses also found usually. Brain anæmic in the majority of cases, wherever hemorrhage large. Scalp injury well marked in some, in others less so; while, in a few cases, it was hardly noticeable.

Histories: Concussion from injuries to head without fracture, in twenty-one cases; with fracture of skull in two cases. Death rapid (all within one hour) or sudden, either from shock or from compression of brain, the result of pressure from clot, or from both. Fourteen males; nine females; ages varied.

Class III.—45 Cases.

Post-mortem appearance: Massive hemorrhage (blood-clot), usually quite large, located between dura mater and inner surface of fractured skull, and at the site of application of violence only. Brain anæmic.

Histories in all these cases revealed injuries to skull from accidents, blows, or other violence, resulting in fracture of skull. Death, on the average, ensued slowly from compression or anæmia of brain in the lapse of from several hours to several days (in a few cases from five to eight days). Thirty-eight males and seven females; majority young and middle-aged persons.

Class IV.—12 Cases.

Post-mortem appearances: Massive hemorrhages, the same as in the preceding class, but occurring both at site of application of violence, and also at some point on the opposite side of skull, the first clot between dura mater and skull, while the latter in the arachnoid (between the dura and pia mater). At the site of injury there was found a fracture of the skull in all these cases,

so that they presented the combined features of Classes II. and III.

Histories: All these twelve cases observed, showed injury to skull, resulting in both fracture and concussion.

Death was nearly instantaneous in all these cases. Nine were males, and three were females; mostly young and middle-aged persons.

Class V.—9 Cases.

Post-mortem appearance: Punctiform and multiple hemorrhages into the tissue of the dura mater, which showed much thickening, and adhesions to inner surface of skull from chronic hemorrhagic pachymeningitis; great œdema of the pia mater. Brain congested, but no blood-clot in either ventricles or substance.

Histories in these cases revealed former attacks of sunstroke, or old injury of the head.

Death usually sudden, and usually following a fall or severe intoxication and excitement. Ages of deceased between twenty and fifty; all males.

Class VI.—34 Cases.

Massive hemorrhage of various sizes into the brain substance proper, and thence into one or both of the lateral ventricles. Hemorrhagic softening of brain substance of corpora striata, or their vicinity. No meningeal hemorrhage in any of these cases, though, in some instances, blood was observed to have leaked out from the inner ventricles through the transverse fissure and the fourth ventricle, and some usually liquid (post-mortem) blood would be seen on surface of brain, in the fissures, and within the meshes of the pia mater and arachnoid. Brain substance, in nearly all cases, quite anæmic. Atheroma of cerebral vessels in all but three cases. Multiple small aneurisms of cerebral vessels noted in several cases. Chronic pachymeningitis, in various degrees, in all but five cases. In some cases there were scalp injuries from secondary falls—*i. e.*, falls that were the result of preceding cerebral hemorrhage.

Many of the cases had come under coroner's jurisdiction on account of suspicion of violence.

Histories, wherever obtainable, revealed either alcoholism, rheumatism, or syphilis; middle or advanced age. Twenty-six males; eight females.

Death, in the majority of cases, ensued slowly. These were cases of true idiopathic cerebral apoplexy.

Class VII.—6 Cases.

Post-mortem appearance: Massive hemorrhage of various size, below pia mater, into brain substance, without breaking into lateral ventricles. In one case the blood-clot involved the substance of the pons and protruded into fourth ventricle; in two cases it occupied the substance of the right parietal lobe, which was the seat of an abscess; in three cases the hemorrhage was multiple, in small foci, with localized hemorrhagic softening of periphery of brain substance in various places. In three cases there was atheroma, and in the other three fatty erosions of the cerebral vessels. Chronic pachymeningitis in all cases. Brain substance congested.

Histories were those of former head injuries, alcoholism, and probable syphilis.

Death rapid, following intoxication or exertions. Age advanced in all cases; five men; one woman.

Foul play had been suspected in all these cases.

Class VIII.—2 Cases.

Post-mortem appearance: Massive meningeal hemorrhage below pia mater combined with hemorrhage into ventricles; no visible hemorrhage into brain substance. Atheroma, and multiple small aneurisms of vessels of pia and of choroid plexus. Ecchymosis in scalp.

Histories of accidental falls. No previous symptoms of cerebral disease had been noted. Intemperate habits, injury of head leading to rupture of the diseased vessels, evidently preceded the cerebral hemorrhage. The persons were at work (washing) at the time, when, nearly simultaneous with the concussion from the fall, death ensued. Both were women, aged fifty-seven and sixty-three years.

A number of cases of intracranial hemorrhage observed, Dr. Formad had excluded from the series above detailed. Several cases of compound comminuted fracture, in which the skull, membranes, and brain were partly pulpified into a mass, and hence the hemorrhage not being satisfactorily made out, were excluded from the above records. He also excluded chronic cases of cerebral hemorrhage, and those resulting in abscesses, or in a fatal lepto-meningitis, or cerebritis, after the patients had partly recovered from the immediate effects of the hemorrhage. He did not incorporate into these records another large class of intracranial hemorrhage, viz., that of infantile meningeal hemorrhage. Of these he had seen many in coroner's work. Meningeal hemorrhage is common in infanticides and fœticides; and even in stillborn children. He could not plausibly explain the frequency of meningeal hemorrhage observed in the stillborn, otherwise than by presuming that it was due to traumatic injuries from violence or to compression of the cranium during protracted labor, or when forceps had been injudiciously applied. He did not meet with cerebral hemorrhage in children, other than meningeal.

Returning to his classification, Dr. Formad stated that the quantity of the hemorrhage or the size of the clot in any case of intracranial hemorrhage appeared in all the cases he observed to depend upon the duration or the time that elapsed from the moment of injury to death. In cases where death ensued rapidly or instantaneously from shock, as in many cases of concussion, or even fractures of skull followed by immediate death, as in falls from a great height, the bulk of the ante-mortem hemorrhage (the blood-clot) was remarkably small; or clots were occasionally entirely absent, and only a post-mortem oozing of liquid blood could be observed. When death is protracted for several hours, then the blood-clot is usually large, weighing up to six or eight ounces, and causes death by compression of brain. In some cases of fracture of skull the hemorrhage is probably delayed for several hours, or ensues but very gradually. Some patients are said to have walked around for many hours after the injury, and subsequently, when the blood oozed out in sufficient quantity to compress the brain, they fell, became unconscious, and died in coma. In one case of this nature he had found a meningeal clot, weighing eight ounces.

He observed that in the cases in which the intracranial hemorrhage was voluminous, and death instantaneous, there was very little scalp ecchymoses; whereas scalp hemorrhage was more pronounced if the intracranial hemorrhage was small, and death delayed.

Further, he noticed that in no case where there was internal cerebral hemorrhage, was there any meningeal hemorrhage when cerebral vessels were normal; and in no case of traumatic meningeal hemorrhage did he see any coincident ventricular hemorrhage (except small ecchymoses), unless there existed some old lesion of the vessels or substance of the brain. It appears, however, that blood from the lateral ventricles may leak through the foramen of Monroe into the third ventricle, and thence by the aqueduct of Sylvius finds its way into the fourth ventricle, but Dr. F. did not see in any one of the cases he observed that a primary hemorrhage into the fourth ventricle ever extended to the lateral ventricles, probably on account of its rapidly fatal character. A hemorrhage on the outside of an uninjured pia mater cannot reach the interior of the brain or the lateral ventricles.

The source of the hemorrhage is often very difficult to determine. In fracture of the skull, the hemorrhage is often diploic; in concussion of brain the hemorrhage has for its source the vessels of the pia mater; in diseased conditions of the brain, or in atheroma of vessels, the small feeding branches of the middle cerebral and of the basilar artery bleed most frequently, and the blood breaking into lateral ventricles forms clots in either one or both of the ventricles.

The view expressed by Dr. J. A. Lidell, in his treatise on apoplexy, that "meningeal hemorrhage not unfrequently occurs spontaneously, as well as in consequence of the operation of violent causes;" and that (see page 120) "meningeal hemorrhage of spontaneous origin is not a rare affection" is unquestionably erroneous. Yet such "*views*" are quoted by book-writers, and presented to juries in murder trials *as facts*.

Ignorant or ill-informed post-mortem examiners can set murderers free, or, on the other hand, can create unnecessary court trials.

CONCLUSIONS.

1. Hemorrhages exclusively above the pia mater and above the dura mater—*i. e.*, on the outside of the brain—are always due to *traumatism* or to *sunstroke*, provided a cerebral source for hemorrhage is excluded, and the cerebral vessels and membranes were not diseased.

2. Hemorrhage in the floor of the fourth ventricle is always traumatic, provided there are no blood-clots in the lateral ventricles, or any part of the cerebral substance.

3. Hemorrhage exclusively below the pia mater, or in any part of the brain substance, or into the ventricles (except the fourth) is always idiopathic—*i. e.*, is due to disease.

4. There must be a diseased condition of the cerebral vessels or substance in order to ascribe a hemorrhage to disease. There must be traumatism (falls or violence) in order to account for a hemorrhage in a brain with normal substance and bloodvessels.

5. The blood-clot in concussion of the brain is not found at the point of application of violence, but usually somewhere about the opposite side of the brain, and always within the arachnoid—*i. e.*, between pia and dura mater.

6. The blood-clot in fractures of skull is always found at the point of application of violence, immediately below, and always between the dura mater and the fractured part of the skull itself. In rapidly fatal cases there is usually a second, an intradural clot (in the arachnoid) in some other part of brain, due to the effects of concussion.

7. A blood-clot formed within the cranial vault is more favorable to the patient if due to fractured skull than if due to a mere concussion.

8. Only clotted blood and infiltration of blood corpuscles into tissues indicate an ante-mortem hemorrhage; liquid blood is due to post-mortem oozing, and only stains, but does not infiltrate tissues.

9. Several bruises and cuts of the scalp may be seen in cases of idiopathic apoplexy, where a sudden cerebral hemorrhage causes a person to fall.

10. In some cases it is impossible to decide by medical examination alone as to whether a head injury and the resulting hemorrhage is due to a fall or to violence.

11. External marks of violence may be invisible to the unaided eye in some cases of injury of the head or other parts, but are easily detected and distinguished from post-mortem spots by means of the microscope.

12. The bulk of an intracranial hemorrhage stands usually in inverse proportion to that of the external scalp hemorrhage.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, May 10, 1886.

THE PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

PRESENTATION OF NEW INSTRUMENTS.

DR. J. A. WYETH presented some steel drills for the fixation of the knee-joint after resection. They are smaller than the nails which have heretofore been used, and can be put in by the drilling process with less danger of crushing through the bones. The drill point is smaller than the shaft, so that as it goes through the bone it gets tighter and tighter, and remains perfectly firm. The parts suffer no concussion, and no chance of displacement, as when the hammer is employed. He uses three of these in the operation, two passing obliquely and laterally from the tibia to the femur, and the third one in the median line from the femur to the tibia downward.

DR. WEIR asked whether they projected beyond the skin more than the nails did?

DR. WYETH replied that they projected about half an inch—not far enough to interfere with the dressing.

DR. MCBURNEY inquired whether, when any pressure was brought to bear on them, they would cut through.

DR. WYETH replied that it had not proved so in his experience.

DR. BRIDDON thought that fixation of the bones is not attained by the wire suture or nails as ordinarily used. He had observed that the nails cut through the cancellous tissue of the bones when driven from the femur into the tibia, or from the tibia into the femur; he thought the bones are more surely maintained in position if the nails, as he had advocated, are driven

in in the exact centre of the bone at the side and at a right angle to the bone about three-quarters of an inch from the cut surfaces; one on either side of the femur, and one on either side of the tibia, these nails being then wired together at the side of the bones hold them securely in position; the plaster-of-Paris dressing being applied after the surgical dressings are completed.

DR. MCBURNEY thought that Dr. Wyeth's drills could be used in the same way as Dr. Briddon's nails. Some time ago he reported a number of cases of resection of the knee-joint, where no nails were used, but only an outside apparatus; and recently he has had another case in which he used nothing but the plaster of Paris applied over an antiseptic dressing, and secured very rapid union. That has been his experience in four cases in which he has dispensed with wire. He thought that in most cases good results can be secured by the simple plaster-of-Paris bandages over the usual dressings.

DR. BRIDDON thought that in the case which he treated without wiring he did not get any union, and he thought it wrong to attempt it.

DR. WYETH said that in one case in which he applied the simple dressing of plaster of Paris over the joint the child got restless. Owing to neglect of the nurse, there was complete displacement, and he was compelled to amputate. That is the only case which he has tried without further fixation of some kind, except one in which there was an abscess in the femur, extending up some five inches. He sawed off the bone until he could bring a sufficient extent of the healthy surfaces together, introduced a drainage tube, which came out at the upper end of the sinus, and placed the thigh in the perpendicular position, so as to drain away from the joint; in that case he used no wire, and the bone united and a good recovery resulted.

DR. L. A. STIMSON said that, in treating cases without fixation, the success depends on the management of the lower segment of the limb. He got excellent results without fixation of the bone by sutures, by placing the limb in a wire gutter and raising the foot so that the leg presses down against the femur; but if the foot is made fast, the femur falls away from the tibia. In three adult cases treated in this manner he has had excellent results; the gutter supports the limb laterally, and prevents displacement by rotation.

DR. GERSTER then presented a female patient, fifteen years of age, upon whom he had performed

EXSECTION OF THE KNEE-JOINT FOR ANKYLOSIS,

the angle being that of ninety degrees. In 1876 she contracted acute infectious osteomyelitis, on account of which sequestrotomy was performed on the 8th of August of that year by Dr. Leonard Weber. The joint was found to be involved, several sinuses leading into it. The cartilaginous surfaces of the knee-joint were found to be eroded, and ulceration had occurred in several places. After this operation treatment by extension was practised, but the patient was afterward lost sight of. In 1880 she again presented herself to Dr. Weber, with an apparent ankylosis of the joint. She was recommended to visit the Hospital for the Ruptured and Crippled, where she was supplied with a brace that was worn for some time. Resection of the knee-joint having been decided upon, she was admitted to the German Hospital in the middle of January of this year. The patient being anæsthetized, the Esmarch bandage was applied to the limb, the firmly adherent patella was chiselled off, and then, by the use of the saw, about two inches of the bony substance of the joint were removed, together with all the superfluous tissue surrounding the joint; but slight hemorrhage followed the operation; the extremities of the bone were then brought into proper position, and secured by nails; the first one passing through the dense, bony substance of the head of the tibia into the femur, two other nails passing from above downward from the femur into the tibia. The first nail used was, however, too highly tempered and was broken off, a portion of it remaining in the tibia until the present time without any inconvenience whatever. He used four nails in all, and secured excellent fixation. In view of the subject just discussed, he would say that he had used nails for fixation of the parts in these cases upon eight patients during the past year, and has found it a very satisfactory method, indeed. He had had no experience with Dr. Wyeth's instrument, which is based upon the same principle as the nails; but he gave the preference to the nails, as almost any nail in common use can be used; it is only necessary that it should have a sharp point and be well disinfected. He has tried the ordinary dry goods box nails, and has found them to answer all requirements. Another advantage is the fact that the nail is held by the bony tissue very firmly in its position, and there is no possibility of any motion as in the instrument devised by Dr. Wyeth. The fixation of the bones by means of nails has been found exceedingly convenient, more so than by wire, as all that the assistant has to do, after the nails are driven in, is to hold up the limb. The only precaution he observes is that he places his index finger between the bones and the popliteal space, so that no nail can be driven through the bones into the popliteal space without one being aware of it, and also to prevent any lateral displacement occurring during the operation.

The first dressing in this case was not removed until the thirtieth day after the operation. On the seventh day after the operation, however, a violent chill occurred, with a temperature of 105° F., which caused some alarm, although it is rather unusual to see such a complication at so late a date, as we rather expect, should such an event occur, that it will take place from the third to the fifth day. There was no reason to suspect any cause for this from the wound, but he deemed it his duty to open the plaster-of-Paris dressing which he applied at the time of the operation, and ascertain the condition of the joint. He found it perfectly normal, and was satisfied that this high temperature did not arise from that source. The dressing was then secured in position again, and a large dose of quinine being administered to the patient, the temperature was at once reduced, and no further rise occurred during her stay in the hospital. On the thirtieth day the dressing was entirely removed, and perfect and firm ankylosis was found to have been secured; the drainage tubes were then removed, the limb being supported by a light plaster splint, and the patient directed to walk about.

DR. WYETH desired to correct an error into which Dr. Gerster had fallen in relation to his drill; had he been present at the first part of the meeting he would have seen that his second set of drills differed from the first

used, inasmuch as the point of the drills is much smaller than the shaft, so that as it passes into the bone it wedges itself tightly in, and thus prevents any possibility of motion. Of course, an instrument founded on a single operation is not to be placed side by side with those which have been well tested by experience. But in the case in which Dr. Gerster states the nail broke off, it would seem that the drill would have proven of great advantage in preventing any such accident.

DR. GERSTER did not consider it a serious objection that a nail should be retained in the bone, so long as it does not impinge on some movable organ, such as a muscle, vessel. or nerve; he believed it would cause scarcely any injury or inconvenience.

DR. HALL, on behalf of DR. SANDS, reported the following case: J. D., aged six. At the age of three and a half years he suffered from submaxillary abscesses, which healed readily under treatment. Three and a half months before the operation he sustained a fall, striking upon the right elbow, which resulted in fungoid inflammation of the joint. He was admitted to the Roosevelt Hospital, and on December 15, 1884, an operation was performed; the elbow at that time was red and tender, and the least attempt at motion of the joint caused intense pain. The patient being placed under an anæsthetic, a transverse incision was made across the tendon of the triceps and a large tubercular gumma discovered which was removed, and the synovial membrane dissected out, as it was found to be tuberculous. In bending the joint, the olecranon was fractured off and this was also removed, and the wound afterward dressed antiseptically. The first dressing was removed on the 15th of January following—four weeks after the operation—and at that time the wound was found to be perfectly healed, but partial ankylosis resulted. On February 18, 1885, the adhesions were broken up, and by February 26 motion to the extent of fifteen degrees was secured. On March 18 he was dismissed, no further attempts at passive motion being made.

Dr. Sands desired to draw attention to the fact that forcible breaking up of the adhesions under ether had secured no better results than the active motion without the administration of ether, as the boy has since developed very good motion by the diligent use of active motion only; extension of the forearm being now almost normal.

The special interest in the case, however, is in the number and variety of tubercular lesions established in the patient. Before leaving the hospital he had a tenderness over one tibia, which disappeared under treatment with iodine; afterward there were swelling and tenderness on the back of one hand involving the bones of the carpus, which also proved to be a tubercular gumma; again, on the other tibia, a tubercular gumma appeared, also upon the skull and the bones of the right forearm. Another point of interest is that the child develops a gumma on every point upon which he strikes in his falls; the gumma being always preceded by an injury, showing that the tubercular bacilli or spores are constantly in the blood of the child, but establish themselves when some subcutaneous hemorrhage occurs. Dr. Hall drew some blood from the child, and inoculated a guinea-pig with it, but so far the guinea-pig has remained perfectly healthy. These tubercular gummata seem all to have been in the bone, and also in some places, as in the hand, to have involved the tendons; there has, however, been no bone come away. It has been generally believed that most of these processes arise from tubercular bronchial glands.

DR. WEIR inquired whether the child had any tubercular manifestations at the commencement?

DR. HALL replied in the negative.

DR. WEIR asked the above question as it seemed more probable that the inoculation of the system came from the operation, which is a consequence not at all infrequent. He had now in his wards, at the New York Hospital, a child with disease of the head of the tibia, who had been previously exploratively operated upon twice before coming under his care. Tuberculous gummata have since developed above and below the site of these incisions. He had cut down recently upon the principal mass, which involved the head of the tibia, and supposed that it was sarcoma, which had been the diagnosis previously arrived at. He had, however, found it to be a subperiosteal tuberculous deposit. In this case there was no previous history of an injury, but the disease first commenced with swelling of the tibia.

DR. GERSTER said that it has been reported in several publications, especially those of Roenig, that the inoculation of tubercle, or tubercular virus, occurs during and in consequence of operations a great deal oftener than was formerly understood; and he believes that therein lies the greatest and most important factor in the production of this condition of more or less general tuberculosis. Dr. Tate has shown, in his most interesting paper on disease of the hip-joint, read before this Society, that those cases treated on the expectant plan have done better, and have oftener been permanently cured, than those in which the joint had been exsected. Dr. Gerster believes that during exsection of the hip-joint a great deal of rough usage of the soft parts is unavoidable, and that this is the cause of dissemination. He has seen a number of cases in private practice and in hospital wards, in which he could not help assuming that the operation of exsection had caused dissemination of the tubercular disease; very much as in the case now presented.

DR. GERSTER presented a specimen from a case of

EXSECTION OF THE KNEE-JOINT FOR SYNOVIAL TUBERCULOSIS OF SEVEN WEEKS' STANDING.

It was removed from the knee-joint of a young woman twenty years of age, upon whom he had operated that afternoon. She was suffering from tuberculosis of the knee-joint, commencing about seven weeks ago; family history was good. About March 15th she was performing the duties of a housemaid in scrubbing floors, the latter being the only possible cause for a traumatic origin. About the middle of March she suddenly felt intense pain in the right knee-joint followed by some fever. She was seen by the family physician, who declared her case to be one of rheumatism, and gave her the usual remedies for that disease; the pain growing more and more intense, the leg became flexed upon the thigh; she was admitted to the German Hospital on the 24th of March. The diagnosis of tubercle of the joint was at once thought of at the time of her admission. No effusion in the joint could be detected, but there was considerable thickening of the capsule of the joint. The joint was rigidly flexed, motion very painful, in-

tegument of normal color, intense pain on pressure over the internal condyle of tibia; temperature 101° F. Ice-bags were applied and the limb was propped up in a comfortable position. Anodynes were also administered, and he was still inclined to treat the case as rheumatism or traumatic inflammation of the knee-joint. The pain and flexion increasing, he punctured the joint on the 4th of April, the patient being under an anæsthetic, and withdrew from the joint, after repeated punctures, a few drops of bloody serum, which were carefully examined microscopically on a number of slides; tubercle bacilli could not be found, but a large quantity of white and red blood-corpuscles were present. He then decided he had a case of incipient tubercular disease of the knee-joint. A plaster-of-Paris dressing was applied to the extended limb, a fenestrum being cut out over the knee for the application of ice-bags. The improvement was very slight and hardly adequate to the corresponding fixation; the elevation of temperature went on, emaciation became apparent and it was necessary to think of more energetic measures of relief. He proposed then to explore the joint and follow out the indications as he might find them. The patient gave her consent, the pain being very intense. Another point was that the skin temperature was three degrees higher than in the other knee. Until to-day, the swelling of the joint remained about the same as before, with a peculiar doughy feeling.

To-day Dr. Cerster placed her under ether, making his first incision through the tendon above the patella; the capsule was incised and a large number of miliary tubercles became visible, embedded in a thickened gelatinous capsule; there was then no doubt about the case whatever; the entire capsule was very much thickened; erosion of the articular surfaces of the internal condyle of the tibia with extensive loss of cartilage was observed; the external condyle was also slightly bared of cartilage, and rough; the capsule, containing a large number of miliary tubercles everywhere, was gelatinous. The crucial ligaments were not involved, the entire synovial membrane was in a state of hemorrhagic imbibition.

The capsular extension of the joint found beneath the quadriceps tendon was especially marked by gelatinous thickening, and in it was found a well-developed cheesy deposit of the size of a hazelnut. The joint was found perfectly empty, and contained neither synovia nor pus.

This was his third specimen of early tuberculosis of the knee-joint obtained by exsection; the diagnosis was based on the febrile symptoms, doughy swelling, painful pressure points, contraction, and the absence of an effusion; finally the gradual and steady increase of the violence of the symptoms in spite of fixation and local treatment. In the first two cases exsection was followed at once by disappearance of the fever and pain, and resulted in a speedy cure.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 20, 1886.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. EDWARD G. JANEWAY, read a

MEMOIR OF THE LATE GASPAR GRISWOLD, M.D., M.R.C.S.,

who died, when not yet thirty years of age, in March last. When an interne in Bellevue Hospital, he had already won distinction in the profession of his choice. While house-physician in the hospital, he was the first to make use of hypodermic injections of pilocarpine for the treatment of the chill in malarial fever, and on one occasion he saved the life of a patient who was in a collapsed state by the intravenous injection of ammonia.

DR. JANEWAY subsequently read a paper on

THE DIAGNOSIS OF DISEASES OF THE HEART.

He said he did not, by any means, propose to go over the whole ground of cardiac diseases as taught in the text-books, but merely to touch upon certain points involved in more or less obscurity, and some in regard to which there are differences of opinion. He first spoke of alterations in the position of the heart, and dwelt particularly upon the lowering of the heart- and the apex-beat resulting from abnormalities in the thoracic aorta; a circumstance to be borne in mind by all those who had to deal with cardiac affections. Again, the heart might be pushed upward and forward in cases of spinal curvature and of enlarged spleen; and when this is the case, it is necessary to be on one's guard lest the condition be mistaken for aneurism of the aorta.

Among the other points treated of were the following: In men the nipple is frequently referred to in the books as a guide for the position of the heart; but on account of the varying location of the nipple in different individuals, this is unreliable, and the centre of the sternum is a much more desirable point of reference.

The cardiac impulse is a matter of considerable interest, and it is not infrequently the case, that in those who have been resting for some time in a recumbent position there is no visible impulse; while sometimes none can be discovered even on palpation. Yet such a condition of affairs may be perfectly consistent with a normal heart, and indicate nothing more than a slight lack of cardiac force.

Thrill, as produced by the heart, is of no absolute and invariable significance, and is met with in various conditions. The thrill accompanying mitral stenosis, however, which is presystolic in time, is of considerable diagnostic value.

In speaking of auscultation of the heart, he remarked that one is apt to consider the heart more or less in a dangerous condition if a murmur is present, but that it is normal if no murmur can be detected. But it is always highly important to pay attention to the heart sounds. In anæmia, all admit that a murmur may appear at the base, and even at the apex. At times a soft murmur can be heard at the second interspace, with normal closure of the valves. Sometimes this is due to anæmia, but not always. If anæmia is not present, the cause is to be looked for in the reduction of the calibre of the pulmonary artery from some pressure upon the vessel. Some murmurs vary with the respiration, and the possible occurrence of a cardiac respiratory murmur is not to be lost sight of. In certain individuals short diaphragmatic contractions are produced when they are told to hold their breath. In order to determine the true character of a murmur, it is necessary that all the circumstances attending it shall be taken into consideration, and in many instances a number of examinations, extending over a

considerable period of time, are required for this purpose.

Murmurs are sometimes liable to be mistaken for each other, as, for instance, a mitral presystolic for an aortic regurgitant. In mitral stenosis there are also great divergencies as regards the character of the murmur, and it is possible for this condition to exist without any murmur at all, or with a murmur which is intermittingly present. In general, it may be said that the loudness or softness of a cardiac murmur is no index of the gravity or insignificance of the diseased condition present.

In speaking of the subject of embolism, Dr. Janeway said that a thrombosis may occupy such a position as to be out of the way of the blood-current, and thus give rise to no murmur whatever. In illustration, he related the case of a young woman, twenty-one years of age, in the syphilitic wards of Charity Hospital, Blackwell's Island, who, while engaged in combing her hair one day, became suddenly affected with hemiplegia, although she did not lose consciousness. A careful examination revealed nothing in the slightest degree abnormal about the heart.

Pulsation of the liver may cause difficulty in making a diagnosis between aneurism of the aorta and disease of the heart. The liver may rise and fall simply as the result of pressure from an enlarged heart, or it may have a true expansile pulsation itself.

Finally, he said, syphilis is a frequent cause of valvular disease of the heart, and a careful examination of the subject would show that it is responsible for many of the cases which are generally supposed to be of idiopathic origin.

DR. E. DARWIN HUDSON, JR., said that the various points touched upon by Dr. Janeway in his paper were of special value as coming from one who had had opportunities enjoyed by scarcely any one else in this or any other country, for following out cases observed during life, to the autopsy room. He had nothing to criticise in the remarks that had been made, and would simply refer to a few points which had occurred to him in connection with them.

The study of the location of the apex is a matter of very considerable importance. This can ordinarily be determined by palpation; but if this is not sufficient, auscultation can be resorted to for this purpose. The location of the apex is of no little diagnostic value. For instance, if the apex is in its normal position, it is practically impossible that there could be either hypertrophy or atrophy of the heart; and hence any alteration in the size of the organ may be excluded. If the heart were shifted out of its normal position, murmurs at the base and apex might have an entirely different significance from what they would have under ordinary circumstances.

In the study of mitral murmurs, it is highly important to consider the composite nature of the first sound of the heart, as so well described by Walshe. In a large number of cases he had found that murmurs which had all the characteristics of mitral regurgitation or mitral stenosis were not permanent. Although he was perfectly satisfied as to the occasional existence of the mitral presystolic murmur, he did not hesitate to say that he was somewhat sceptical in regard to its frequency. There are a great many murmurs which simulate the true mitral systolic murmur; and time, rest, and the use of cardiac sedatives are not infrequently required to enable one to determine with accuracy the condition present in any given case. At the present time he had under observation a boy who had a cardiac murmur which is most distinctly heard at the apex, and can also be heard behind, but is not transmitted around the walls of the chest. Hence this sign, which is often spoken of in the books, is fallacious.

DR. HEINEMANN said that it is an important distinction for those engaged in the study of diseases of the heart to remember that it is not the apex-beat alone, nor the size of the heart alone, and not the murmur that might be present alone, but all these combined, together with the examination of the pulsations in the neck, and the clinical history of the case, which must be taken into consideration in making a diagnosis. Before arriving at a definite conclusion in obscure cases, we would help ourselves by going over the entire case, with the clinical history.

As to the matter of thrill, he had studied this sign carefully for a number of years in the patients met with at Prof. Alonzo Clarke's clinic, and he had found that there may be a very loud and intense murmur, and yet no thrill. There is, therefore, no relation between the presence of thrill and the intensity of the murmur. As regards time, the presystolic thrill is not always to be relied upon. It is only one element in the diagnosis, and one that is uncertain.

If three or more murmurs are present in a case, it is impossible to say, upon a single examination, what the exact condition is at the aortic and mitral orifices. This can only be determined by repeated examinations.

DR. ALFRED L. LOOMIS remarked that Dr. Janeway had called attention to some very difficult questions. In the first place, he had spoken of displacements of the normal heart as a result of changes in the aorta. At one time he had had occasion to examine the hearts of a large number of healthy persons, and his experience thus acquired had shown him that the variations as regards the position of the apex-beat are much greater than the books would lead us to believe. Downward displacement of the heart was the one which struck him as the most common, and the most likely to occur —that is, displacement without disease. If the apex is below the normal limit, while the heart is normal in other respects, it will not have any special pathological significance.

As regards the force of the apex-beat, there could be no doubt that, as Dr. Janeway had said, a decided settling back of the organ is liable to occur as a result of the horizontal position. In many healthy individuals it is impossible to make anything out by means of palpation, with the patient in the ordinary position. In order to facilitate this, he should be asked to lean forward, but even this sometimes fails in eliciting the desired information. Long confinement in bed, he thought, interfered with the nutrition of the cardiac walls. In heart-troubles, it is not the murmur and the changes of position which are of so much consequence as the integrity of the walls of the heart and of the rhythm.

The more he studied the heart, the more convinced did he become that cardiac murmurs are not of as much significance as is apt to be supposed. But

when, with the murmur, there are evidences of changes in the walls of the heart, as well as changes in the rhythm, these give us more information than the force and character of the murmur. Thrill, he said, is generally present in presystolic mitral obstruction murmurs; but this is not the only thrill. In dilatation of the right heart there may be thrill as well as murmur.

The diagnosis between presystolic and aortic regurgitant murmurs is an old question. Many years ago he had seen an autopsy in a case in which the latter murmur was believed to be the one present during life; and it was found that there was stenosis of the mitral orifice. Since then, he said, there had never been to him any question about the presystolic murmur and the conditions which give rise to it. It is not of serious import, unless the result of endocarditis. The two murmurs are, in fact, however, so different that there need be little difficulty about the diagnosis at the present day.

In order to have hepatic expansive pulsation it is necessary, in his experience, to have very free tricuspid regurgitation.

Dr. Loomis then went on to say that the medical mind ought to be freed from the trammels of these murmurs. It is the dilatation of cavities that caused the trouble; but if there is perfect compensation, there will be no difficulty. Sometimes the dilatation of the heart-cavities is quite sudden, as in one case referred to by Dr. Janeway, in which this sudden dilatation was the direct result of unusual physical exercise. In conclusion, he said that he had not understood whether Dr. Janeway considered ulcerative endocarditis a primary or a secondary affection; and there is considerable diversity of opinion as regards this point.

DR. JANEWAY replied that he had seen two cases recently in which there was cystitis, with septic organisms, and the ulcerative endocarditis present was clearly secondary. He had also seen many other similar instances, and one was a case of pyæmic pneumonia, in which the presence of the pneumococcus of Friedländer was satisfactorily demonstrated. But there are undoubtedly other cases in which the ulcerative endocarditis is a primary process. Here nothing has preceded the endocarditis, and yet numerous vegetations are found associated with abundant microörganisms. The most careful investigation failed to show that these patients had been exposed to typhus or other form of infectious disease, and they were not followed by cases of such disease in other individuals. It was, therefore, highly probable that the ulcerative endocarditis was primary. Then again, there is a third class of cases in which it is impossible to say whether the endocarditis is primary or secondary, and in illustration he mentioned the case of a boy suffering from osteomyelitis, as well as endocarditis, which was of this character.

NEWS ITEMS.

MONTREAL.

(From our Special Correspondent.)

LONGUE POINTE ASYLUM.—There will be, during the present session of the Quebec Legislature, a good deal of discussion concerning the now notorious asylum, the St. Jean de Dieu. An act passed last session for the better management of the institution has, so far, been a dead letter, the Lady Superior, Sister Theresa de Jesus, having refused to allow its provisions to be carried into effect.

The report of the Government inspecting physician, Dr. H. Howard, has just been published, and in it a remarkable state of affairs is disclosed. The Reverend Mother Superior, on being requested to accept the board of physicians appointed by the Government, flatly refused, and appointed her own medical men to take charge of the patients.

Dr. Howard advises the Government to annul the contract in its entirety, and to take the Provincial asylums under its own control. He says: "Thus all petty jealousies and suspicions would be silenced, and, above all, there would be an opportunity to raise our insane asylums to the dignity of scientific institutions." If it is not prepared to take this step, the inspecting physician then suggests that the nuns have charge of the idiots and imbeciles—these the sisters will be able to treat themselves, as no doctors will be required. The insane should be treated in a special hospital under the control of a medical board appointed by Government. He considers that this latter plan would meet the views of the public and the contractors. With regard to the contract system, Dr. Howard says: "It is barbarous to have the incurably insane treated by contract, even though the contractors be saints. I believe it a mistake that religious communities should become contractors when, although they take payment from the civil authorities, they refuse to yield to civil power unless by so doing it will be in accord with the obedience due to their Superior-General." The report also mentions the fact that vaccination, although ordered to be performed in September, was not carried out till December, and after several of the inmates had died of smallpox. Dr. Howard says that the asylum is scrupulously clean and neat, well ventilated and heated, but remarks that something more than this is necessary for treating the insane. After giving statistics of deaths, the report in conclusion states: "These statistics do not speak well for the management of the asylum, and are strong arguments in justifying the Government in passing the acts of last session."

This is the first report of the inspecting physician that the Government has made public for years. Although Dr. Howard has for years past, in his reports, drawn attention to the way the insane were treated by the Sisters and the iniquity of the contract system, the Government never dared publish them. Now, however, when the Sisters openly defy the Government, it is glad to avail itself of Dr. Howard's reports.

VACCINATION AND SMALLPOX.—The Rev. M. Descarries, curé of St. Henri de Montreal, reports that up to the 31st December, 1885, there had been 233 cases of smallpox at St. Henri, with 115 deaths, all of whom were unvaccinated. Only one person vaccinated successfully within the year took smallpox.

THE ASSOCIATION OF AMERICAN PHYSICIANS will hold a preliminary meeting for organization in the Army Medical Museum building, Washington, D. C., on June 17 and 18, 1886.

The following papers are announced to be read on the occasion:

Address by the President, Francis Delafield, M.D., of New York.

Knee-jerk and Muscle-jerk in Disease, by S. Weir Mitchell, M.D., in conjunction with Morris J. Lewis, M.D., of Philadelphia.

Typhoid Fever, by F. Peyre Porcher, M.D., of Charleston, S. C.

Spasm of the Larynx in Rickets, by J. T. Whittaker, M.D., of Cincinnati, Ohio.

Discussion: Does the Present State of Knowledge justify a Clinical and Pathological Correlation of Rheumatism, Gout, Diabetes, and Chronic Bright's Disease? Referee, James Tyson, M.D., of Philadelphia. Co-referee, W. H. Draper, M.D., of New York.

Notes on some Cases of Diaphragmatic Pleurisy, by E. T. Bruen, M.D., of Philadelphia.

Certain Elements found in the Blood of Malarial Fever, by W. T. Councilman, M.D., of Baltimore.

Certain Clinical Facts connected with Tabes Dorsalis, by H. N. Lyman, M.D., of Chicago.

Diseases of the Appendix Cæci, by Reginald H. Fitz, M.D., of Boston.

Periuterine Inflammation, by Wm. M. Polk, M.D., of New York.

An Experimental Study of Glomerulo-nephritis, by W. H. Welch, M.D., of Johns Hopkins University, Baltimore.

Bicuspid Condition of the Semilunar Valves, by William Osler, M.D., of Philadelphia.

Other papers have been promised, but their titles have not yet been announced.

THE FIRST ANNUAL REPORT OF THE ADIRONDACK COTTAGE SANITARIUM has been received. The Adirondack cottages were opened for the reception of patients February 1, 1885. As the undertaking was one which in this country, at least, had no precedent, and as those who had assumed the responsibility were totally inexperienced in such work, the management of the institution has necessarily during its first year been beset with difficulties which experience alone could have anticipated. It has therefore been much of the nature of an experiment. The results obtained and the hearty support accorded on all sides, have led the management to hope that the experiment may fairly be said to have proved a success. The future of the enterprise will depend on the support given it by the public; that it is a necessity and capable of accomplishing much good, the experience of the past year has demonstrated. In that year 26 patients, 12 men and 14 women, have become inmates of the institution; of these 2 have died, 4 have shown no improvement, 8 are still under treatment, and 12 have returned to their occupations, apparently restored to health.

DEATH OF DR. W. O. BALDWIN.—Dr. William Owen Baldwin died in Montgomery, Alabama, on May 30th, in his sixty-eighth year. He was an Associate Fellow of the College of Physicians of Philadelphia, President of the Medical Association of the State of Alabama, and a member of the American Medical Association, of which body he was President in 1869. He was also the author of numerous contributions to medical literature.

NEW HAMPSHIRE MEDICAL SOCIETY.—The ninety-sixth annual meeting of this Society will be held in Concord on Tuesday, June 15, 1886.

MICHIGAN STATE MEDICAL SOCIETY.—The twenty-first annual session of this Society will be held at Jackson, beginning the second Wednesday (9th) in June, 1886.

ILLINOIS STATE MEDICAL SOCIETY.—The thirty-sixth annual meeting of this Society was held in Bloomington on the 18th and 19th of May, 1886. The following officers were elected for the year 1886–1887:

President.—W. T. Kirk, M.D., of Atlanta.

First Vice-president.—E. Wenger, M.D., of Gilman.

Second Vice-president.—W. O. Ensign, M.D., of Rutland.

Permanent Secretary.—D. W. Graham, M.D., of Chicago.

Treasurer.—Walter Hay, M.D., of Chicago.

RESIGNATION OF PROF. EDES.—Dr. R. T. Edes has presented his resignation of the Jackson Chair of Clinical Medicine in the Harvard Medical School.

NOMENCLATURE OF MENTAL DISORDERS.—In pursuance of a resolution passed at the Medical Congress on brain diseases, held last summer at Antwerp, by which it was suggested that local conferences should be held to draw up trustworthy international tables of statistics on insanity, a conference of Austro-Hungarian specialists will be held at Vienna on December 26 and 27, 1887. The invitations have been issued by Drs. Benedict, Gausen, Leidesdorf, and Meynert, of that city. It is proposed that the conference shall revise the nomenclature of mental disorders.

HEADACHE IN SCHOOL CHILDREN.—PROF. N. J. BYSTROFF has examined 7478 boys and girls in the St. Petersburg schools, during the last five years, and found headache in 868; that is, in 11.6 per cent. He states that the percentage of headache increases almost in a direct progression with the age of the children, as well as with the number of hours occupied by them for mental labor; thus, while headache occurred in only 5 per cent. of the children aged eight, it attacked from 28 to 40 per cent. of the pupils aged from fourteen to eighteen. The author argues that an essential cause of obstinate headache in school children is the excessive mental strain enforced by the present educational programme, which leaves out of consideration the peculiarities of the child's nature and the elementary principles of scientific hygiene. The overstrain brings about an increased irritability of the brain, and consecutive disturbances in the cerebral circulation. Professor Bystroff emphatically insists on the imperative necessity for permanently admitting medical men to conferences of school-boards. Of palliative measures, he mentions methodical gymnastics, mild aperients in well-nourished children, steel in the anæmic, bromides, inhalation of oxygen, and, in severe cases, a temporary discontinuance of all studies. —*British Medical Journal*, May 15, 1886.

PROFESSORIAL SALARIES.—Under this title, a recent contribution to the *Scotsman* furnishes some interesting statements as to the incomes of the various professors of

the Medical Faculty of the University of Edinburgh. The net income from salary, fees, etc., of the chair of anatomy would appear to amount to £3440; and, next in order of amount, comes that of physiology, which is worth £2170 yearly. The chairs of botany, materia medica, natural history, pathology, midwifery, and clinical surgery vary in value from £1600 to £1950 per annum. In the aggregate, the income of the chairs in the Medical Faculty amount to £26,628, and the expenses connected with them to £5180, leaving a net total revenue of £21,230. Particulars are also given of the work expected of the holders of these posts. These figures will probably bear comparison with the returns of most universities at home or abroad; nor can the remuneration be considered excessive so long as the teaching work is performed satisfactorily; indeed, it is only by liberal treatment that the best men can be secured, and induced to remain and become a credit to their university. It is the inability to meet such demands that hampers the selection of men for smaller and less well-provided-for universities.—*British Medical Journal*, May 1, 1886.

STEAM IN SEWERS.—The question as to whether exhaust steam in sewers is injurious to public health, was discussed at a recent meeting of the medical officers of the Buffalo Municipal Board of Health. Dr. Geo. Fell, who has had an extensive experience as a civil and sanitary engineer, was invited to speak to the Board on this subject. In his opinion, the discharge of steam in sewers is not injurious to the public health, provided the sewers are ventilated. If, however, the sewers are not ventilated, the practice is dangerous, since by increasing pressure in the sewers, the sewer air may be forced through traps into dwelling-houses.

CHEAP FOOD FOR THE PEOPLE.—At a meeting recently held under the presidency of Dr. B. W. Richardson, the following resolution was unanimously carried: "That in the opinion of this meeting the most practical mode of developing the best system of supplying cheap dinners and other meals for the people ought to include the establishment of public kitchens and depots, at which the dinners and meals can be partaken, and from which they can be supplied to workshops, factories, and private houses. That such a system, supported by the general and influential public, would be immediately popular, and that the chairman be requested to communicate this view of workingmen themselves to the leading organs of public opinion." A committee has been formed to carry the above into effect.

NOTES AND QUERIES.

REMOVAL OF FOREIGN BODIES.

A correspondent calls attention to the fact that the late Dr. John Hodgen, of St. Louis, devised the identical plan of removing foreign bodies by means of a silver wire loop which was published in this journal for May 1st, as by Jonathan Hutchinson. Dr. Hodgen also devised and published a cut of an instrument having two loops at right angles to each other. This is a singular instance of two persons hitting upon the same plan for a difficult although minor operation. Dr. Hodgen used it for a urethral calculus.

SUPERNUMERARY MAMMARY GLAND.

I CAN add another to the instances of supernumerary mammary gland reported by Dr. Edwards in THE MEDICAL NEWS of March 6th.

In February, I attended a lady in her first confinement who had never noticed anything unusual about her left axilla, until the third day after labor, when a swelling, occupying the middle of the armpit, occurred when the breasts became distended with milk, and lessened in size as they were emptied.

Its first appearance was attended with acute pain, which is since less troublesome. There is no nipple, and there has been no discharge of milk. It has been closely watched, and has not inflamed. I have become satisfied that it is another instance of the anomaly referred to.

F. A. CASTLE, M.D.

55 E. FIFTY-SECOND ST., NEW YORK.

CORRIGENDUM.

Page 525, second column, for "Graves" *read* Treves; page 526, first column, for the late "Dr. Gross" *read* the late Dr. J. Marion Sims.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 29, 1886.

DICKSON, S. H., *Passed Assistant Surgeon.*—Detached from the Naval Academy, and to the "Constellation."

SIMON, W. J., *Surgeon.*—Detached from the Naval Academy, and to the "Constellation."

KIDDER, B. H., *Surgeon.*—Detached from the "Powhatan," and to the "Tennessee."

RHODES, A. C., *Surgeon.*—Detached from the "Tennessee," proceed home, and wait orders.

CORDEIRO, F. J. B., *Assistant Surgeon.*—Detached from the "Powhatan," proceed home, and wait orders.

CLARK, J. H., *Surgeon.*—Ordered for examination preliminary to promotion.

HUGG, JOSEPH, *Surgeon.*—Detached from the "Minnesota," and granted sick leave.

H. N. BEAUMONT, *Surgeon.*—Ordered to the Receiving Ship "Minnesota."

LAW, H. L., *Surgeon.*—Detached from the "Wabash," and granted sick leave.

HENRY, CHAS. P., *Assistant Surgeon.*—Ordered to the Receiving Ship "New Hampshire."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT OF THE U. S. ARMY, FROM MAY 25 TO MAY 31, 1886.

HARTSUFF, ALBERT, *Major and Surgeon.*—Detailed as member of a Board appointed to meet at U. S. Military Academy, West Point, N. Y., on June 1 and August 25, 1886, to examine into the physical qualifications of members of the Graduating Class, and the candidates for admission to the Academy.—*S. O. 121, A. G. O.*, May 25, 1886.

Par. 7, *S. O. 120, A. G. O.*, May 24, 1886, revokes so much of par. 12, *S. O. 119, A. G. O.*, May 21, as details *Surgeon* ALFRED A. WOODHULL as member of Medical Examining Board, to meet at West Point, N. Y., on June 1, 1886.

APPEL, A. H., *Captain and Assistant Surgeon.*—Ordered for duty at Fort Reno, Indian Territory.—*S. O. 52, Department of Missouri*, May 24, 1886.

BENHAM, R. B., *Assistant Surgeon.*—Ordered for temporary duty at Fort Omaha, Nebraska.—*S. O. 56, Department of the Platte*, May 24, 1886.

JOHNSON, R. W., *First Lieutenant and Assistant Surgeon.*—Ordered for duty at Fort Adams, Rhode Island.—*S. O. 45, Division of the Atlantic*, May 25, 1886.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course, not necessarily for publication.

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